

American Artisan

Founded 1880

The Warm Air Heating and Sheet Metal Journal

Vol. 95, No. 21

CHICAGO, MAY 26, 1928

\$2.00 Per Year

MIGHTY MIDGET

UNISHEAR

*It cuts a place for itself
in any shop*

One-Half Original Size
Weight—5 lbs. with motor

\$56

with 110-volt
Universal Motor
220-Volt Motor \$59.00

*Easier to handle than
your favorite pair of snips*

*Cuts
straight,
irregular,
curves
and
circles*

NOT only extremely easy to use but *speedy*—cutting 15 feet a minute or more—all depending on the operator, and it does cutting work you can't do with any other machine.

It cuts *clean*—no burr or distortion—following along any line—straight, curved, circular, or irregular as accurately as drawn.

The border of this advertisement was cut with a Mighty Midget Unishear—reduced. Cuts up to 18 U. S. Gage (0.053) sheet iron—saves time, saves labor, speeds up output, gets difficult cutting jobs done in a hurry. The cutting line is always in sight.

It's absolutely safe, too—saves hands and energy.

It's the greatest cutting tool you ever saw.

Your Jobber or Sheet Metal Supply House sells the Mighty Midget Unishear—get one now.

The Unishear line of cutting machines is complete. There is a Unishear for every cutting purpose up to 14 inch steel.

THE UNISHEAR COMPANY, Inc.

Main Office and Factory: 270 La Fayette Street, NEW YORK, N. Y.

Branches: Boston, Chicago, Cleveland, Detroit, Milwaukee, Philadelphia, Pittsburgh, San Francisco

Minimum
Radius
one inch

17-Years Use and Still Satisfactory Since 1911



L. G. RATHBUN

Mr. Rathbun
Homer Furnace Co.
Coldwater, Michigan

HOMER

DENVER, COLORADO
November 11th 1917

Attention C. B. Strong

Dear Mr. Strong:

I desire to write you a brief outline of my experience acting as your dealer in Denver.

I came here in January 1922 and found a considerable few Homer furnaces installed by local dealers under a jobber who had previously handled them in local territory. All were giving good service. The installation dated back to 1911, and this was like the rest in giving satisfactory results today.

Since starting here I have installed several hundred furnaces, pipe and stoves and without exception they are giving unqualified satisfaction. It has been my aim to every one to install the job according to the latest available information from your office, The National Association, and other sources. To have a meeting here that was to play the doorbell where there is a Homer installed is sure of a welcome.

Homer are designed to meet the conditions imposed by the highest standards of the day. This high quality with your controlled dealer service, under the best combination offered by manufacturers today.

Yours truly,
L. G. Rathbun



Mr. L. G. Rathbun who has been representing Homer's in Denver since 1922 has found that popular consumer sentiment is for Homer quality and perfection. Read what he says about a welcome from Homer users.

A Remarkable Endurance Test for HOMER Quality

When a furnace will function perfectly after 17 winters of continuous heat distribution, there is more than a mere assembly of castings. It shows that the quality of materials and the process of construction is sufficient to endure under the most exacting requirements.



HOMER "GRAND"

When a Homer Agency contract is yours, you have assurance that sales resistance is reduced to a minimum and satisfaction is the inevitable lot of your customer. This is the experience of every Homer dealer with the results that net profits become attractive when the year's volume has been figured. Every Homer user is a living testimony of home comfort thru the economical use of a Homer warm air furnace. This warm air heating plant is constructed in accordance with the Standard Heating Code which is another feature as sales ammunition for a Homer dealer. (Write today for details about



HOMER "ACE"

HOMER—THE COMPLETE AGENCY

Plan with us for a Greater, more Profitable Business

HOMER FURNACE CO., Coldwater, Michigan, U. S. A.

Capacity over
30,000 Furnaces
Annually

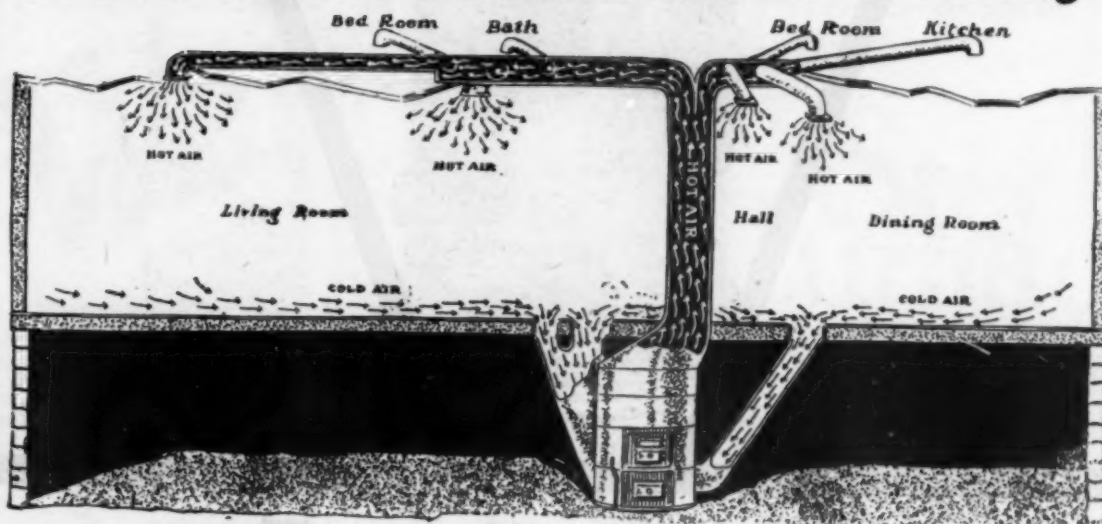
*"What's home
without a Homer"*

There's Harmony
in Homer Heated
Homes

XXth Century Overhead System



Distributes Heat More Evenly



Here is another diagram of an actual XXth Century Patented Overhead Heating System.

This long, narrow bungalow is being successfully heated in every room.

The greater velocity of heat traveling up the main pipe carries it farther away from the furnace than possible by the old system.

Heat registers are in the ceiling. Furniture can be placed where desired without fear of scorching. The basement is free from heat pipes, giving more space for laundry and other purposes.

The XXth Century Patented Overhead System is another big advantage XXth Century dealers have. Its merit is fast being recognized and to the profit of XXth Century dealers. Why not send the coupon today and get the facts?

The XXth Century H. & V. Co., Akron, O.

Without obligation, please send me complete facts about the Overhead System of Heating and your Dealer Proposition.

Name

Address

A-A 5-26-28

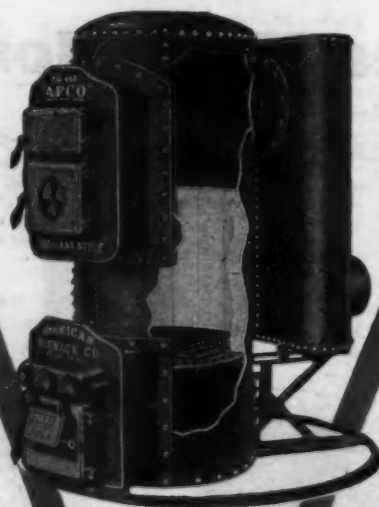
Double Profits for "AFCO" Dealers

Double profits on every "AFCO" Boiler Plate Furnace you sell—that's what you can expect when you become an "AFCO" dealer.

An "AFCO" installation wins the hearty recommendations of the owner because it gives complete heating satisfaction. Satisfied customers are your best salesmen. When every installation sells another, you make double profits.

We make it easy for you to overcome competition and get in the real profit-paying business. If you have not received the "AFCO" plan, write for it today. The coupon below is for your convenience.

American Furnace Co.,
ST. LOUIS, MO.



"AFCO" Boiler Plate Furnaces

AMERICAN FURNACE CO.,
St. Louis, Mo.

A. A.

Please send full details of your Dealer Plan and your Catalogue (without obligation).

Name

Address

**Mail this
coupon**

Mention AMERICAN ARTISAN in your reply—Thank you!



ordinary or special
brands of steel that
are bought on the open
market and *used in other
steel furnaces—*

***are not good enough
for the —***

Weir



*[The original steel
furnace---now in
its 46th year]*

**Steel
Furnace**

*that's one reason why it's the highest
grade steel furnace on the market*



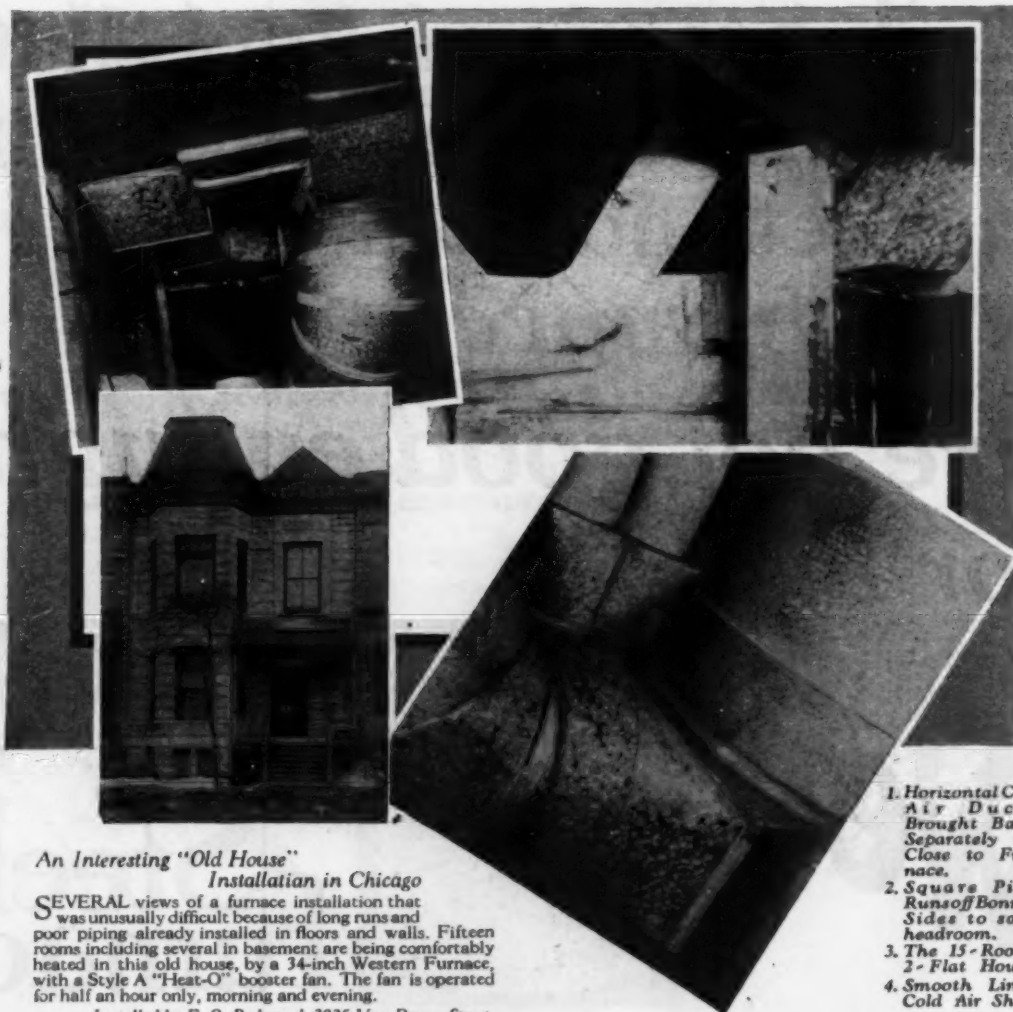
STEEL used in the WEIR Furnace is not alone high quality,
but is rolled specially for its purpose—every square inch
to our own rigid specifications. Of course this costs con-
siderably more per pound than ordinary steel, but nothing less
will do to maintain the high standard of the WEIR Furnace.

WRITE for the WEIR Book of Facts. It
tells all about this Special Steel as well
as other REALLY EXCLUSIVE FEATURES.

The MEYER FURNACE Co.
Peoria-Illinois

"Western"

BOILER PLATE
FURNACES



An Interesting "Old House"

Installation in Chicago

SEVERAL views of a furnace installation that was unusually difficult because of long runs and poor piping already installed in floors and walls. Fifteen rooms including several in basement are being comfortably heated in this old house, by a 34-inch Western Furnace, with a Style A "Heat-O" booster fan. The fan is operated for half an hour only, morning and evening.

Installed by F. O. Redmond, 3025 Van Buren Street.

1. Horizontal Cold Air Ducts Brought Back Separately till Close to Furnace.
2. Square Pipe Runoff Bonnet Sides to save headroom.
3. The 15-Room, 2-Flat House.
4. Smooth Lined Cold Air Shoe.

"Western"

boiler plate

A sturdy practical furnace that meets the requirements of the average home in a most satisfactory way. Here are some of the reasons.

Permanently gas tight. Built of heavy copper bearing boiler plate, with joints cold riveted and caulked, one-piece body construction (without rivets on front extension).

Economical in operation. Designed on a common sense plan, without useless frills, but including the essentials of economical combustion hot blast gas consumer. V-baffle in radiator, large brushing surface. The Radiator is extra large with angle support and one piece side wall construction.

Economical in first cost. Although quality is built into every part of the Western, its price is such that it even competes with a cast furnace.

Practical in design, with features which actually add value in service, such as corrugated top to take up expansion and contraction, and heavy double grates which are easily shaken from a standing position.

Time tested in cold northern climates, and absolutely guaranteed.

Write for complete data

Western Steel Products Company

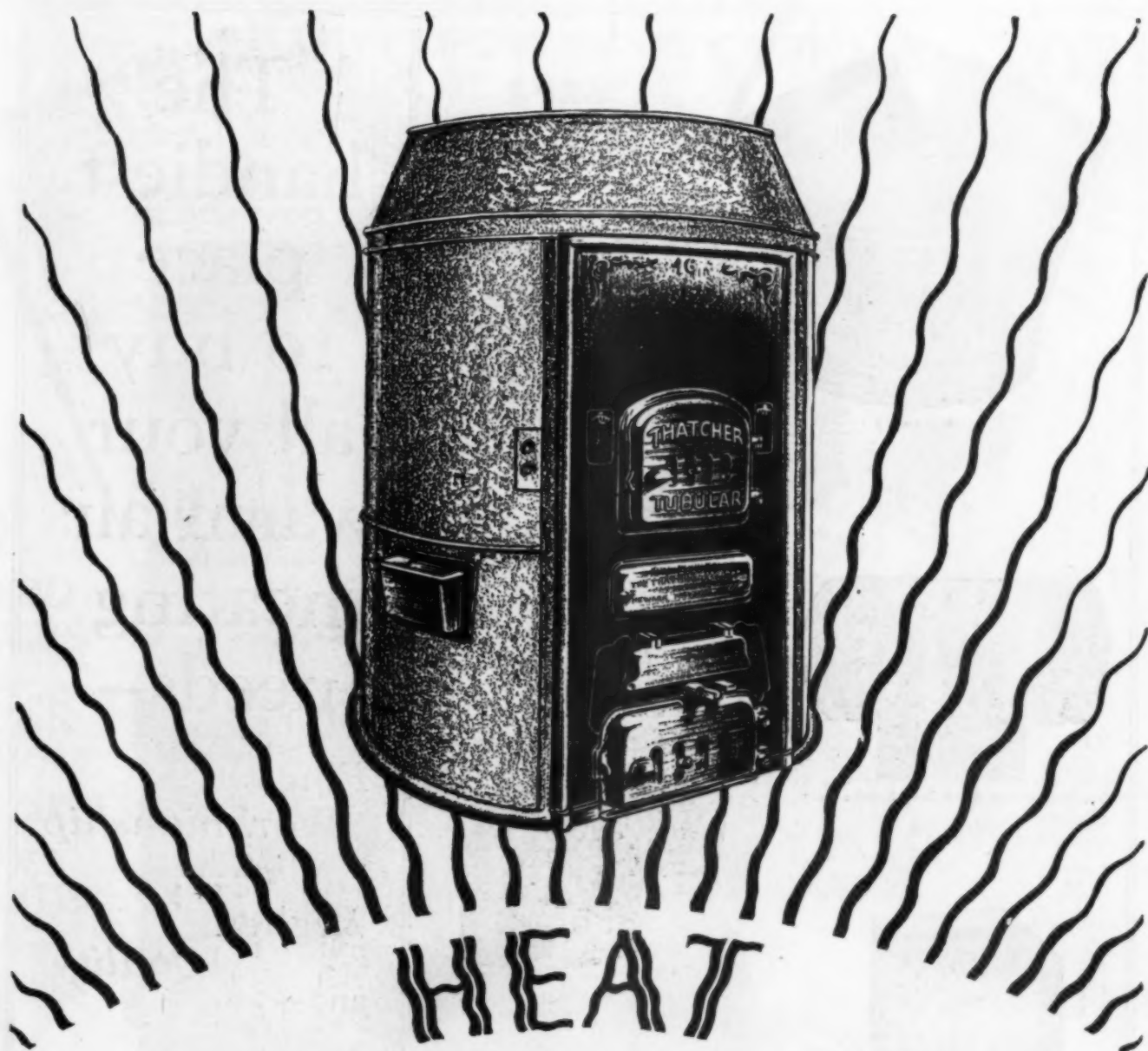
130 Commonwealth Ave.

DULUTH, MINNESOTA, U. S. A.

Distributed by:

Atlanta, Ga. Moncrief Furnace Company
Pittsburgh, Pa. Wagener-Price Furnace Company
San Francisco ... Pacific Sheet Metal & Furnace Co.

Ravenna, Ohio. Ravenna Furnace Company
Chicago-Western Steel & Products Co.
..... 3025 W. Van Buren St.



for the HOME OWNER—PROFIT for the DEALER

NO one needs to be told about the "Celebrated Thatcher Tubular Furnace!" It is acknowledged the peer of all Warm Air furnaces. With nearly a century of performance behind it—why should it not have achieved success? Every dealer knows that satisfaction follows the installation of a "Thatcher Tubular!" It

delivers healthful heat in abundance at low fuel cost. Send for details and descriptive catalogues.

THE THATCHER COMPANY

39-41 St. Francis St. Newark, N. J.
New York: 21 West 44th St. Chicago: 341 No. Clark St.

THATCHER
TUBULAR FURNACES

BOILERS . FURNACES . RANGES . RADIATORS

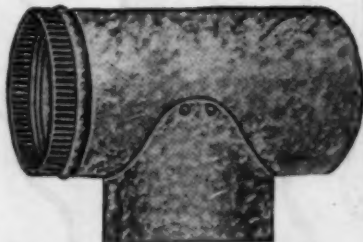
Mention AMERICAN ARTISAN in your reply—Thank you!



Galvanized Y



No. 100 Shoe with Adjustable Collar



Galvanized and Black Iron Smoke Tees

4-Piece 90° No. 24 Gauge
Galvanized Iron Adjustable
Smoke ElbowCarton of Nested Tin
Pipe

4-Piece 90° Adjustable Elbow

The
handiest
place
to buy
all your
warm air
heating
needs—

*Finest
Workmanship*

*Highest
Quality*

and—

*Service
and Prices*

that make our
customers friends.

Write for
catalog No. 45
today

F. MEYER & BROTHER CO.
PEORIA, ILLINOIS

Registers
Wood Faces

HANDY PIPE

All Warm Air
Heating Supplies

Mention AMERICAN ARTISAN in your reply—Thank you!

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\$50,000.00 ADVERTISING CAMPAIGN

BACKING THE NEW

1928

GARLAND

8 IMPROVED FURNACES



8
SOLID
PAGES
of
YOUR
OWN
NEWSPAPER
To
ADVERTISE
Your
BUSINESS

Modern Heating News
NOW FOR YOU

GARLAND

GARLAND
PERFORMANCE
SUBSTANTIATED
By MILLIONS of USERS
GUARANTEED
by the
WORLD'S
LARGEST
Stove and Furnace
Makers

**A
DEFINITE
FINANCE
PLAN**

**YOU CAN SELL
ON TIME**

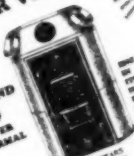
**WE
WILL CASH
YOUR PAPER**

**SEVEN YEARS AND THE
FRIENDSHIP OF THOUSANDS**
and For Your Family's Welfare

1872
Write
for
Agency
Infor-
mation
TODAY

**DEPENDABLE
SUPER VALUE**

**GARLAND
70
SUPER
THERMAL**



We invite your
investigation of the
GARLAND and all
our selling plans

**GAUG
HEATING
BY THE
Largest Stoves**
- Detroit - Michi

**OUR
DECISION
CHART**
The World's
Largest Stove Company

LOW PRICE

**GARLAND
70
SUPER
THERMAL**



Please to Us
for Free Information
and Estimates

GARLAND

DIVISION

DETROIT-MICHIGAN STOVE CO.
DETROIT, U. S. A.



GARLAND DIVISION
Detroit-Michigan Stove Co. Detroit
We invite your investigation of the
GARLAND and all our selling plans



TORRID ZONE ALL STEEL GAS-TIGHT FURNACE A SURE SALES WINNER

YOU cannot build a growing, profit-paying furnace business with an inferior product. Every installation you make, every furnace you sell, is going to be either a liability or an asset to you in years to come. Every day prospective furnace purchasers are mingling with your customers, seeking opinions and suggestions concerning the merits or faults of furnace installations. You can't afford to take chances on gas-leaks, unreasonable fuel consumption, poor workmanship or other features of construction or operation that might give your customers cause for complaint.

Every Torrid Zone Steel Furnace is guaranteed for Ten years and we have on file, scores of letters from dealers and users telling us of Torrid Zone Furnaces installed 25 and 30 years ago, that are still in use, still giving satisfactory service and still gas-tight. The New Torrid

Zone for 1928, is heavier, larger and has many features of construction and operation that were unknown 30 years ago.

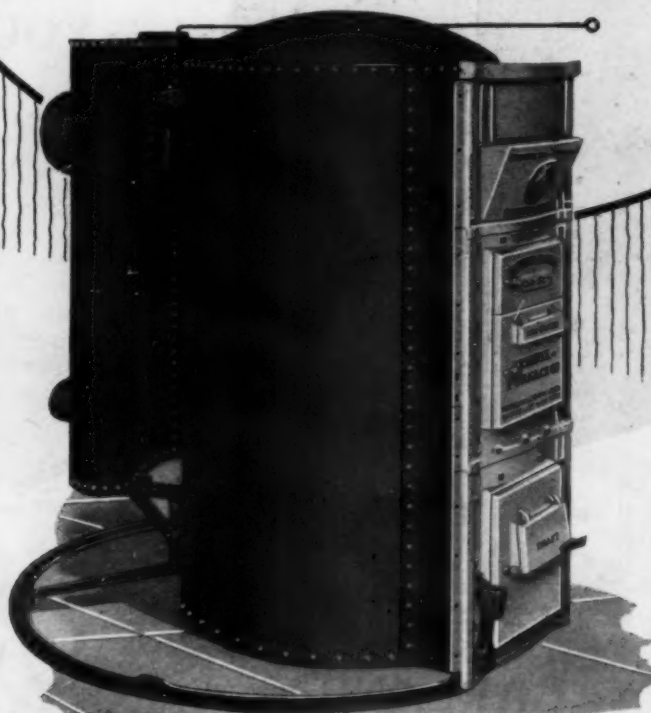
Your customers will appreciate the convenience offered by the long upright shaker handle, the clinker dumping locomotive type grates, the large double feed doors, and the easily accessible ash pit. As a Torrid Zone dealer you will represent the world's largest manufacturer of Steel Furnaces and will have at your command nearly a hundred styles and sizes to meet every installation requirement. We will co-operate with you in carrying Torrid Zone sales made under the deferred payment plan.

Consider the future of your business. Investigate Torrid Zone possibilities in your community. We will gladly send complete information at your request.

LENNOX FURNACE COMPANY, INC.

MARSHALLTOWN, IOWA

SYRACUSE, NEW YORK



Riveted Steel Construction

Torrid Zone Steel Furnaces are riveted and calked like a steam boiler. The use of open hearth mild steel plates put together in this way gives Torrid Zone Steel Furnaces that most desirable and necessary feature — gas-tight construction.

PROVEN

in
Principle

in
Performance

and Now in
SALES



The New Richardson
"PERFECT"
Square Cased Warm Air Heater

A new era in home beauty. And a new era in heater sales! Home owners who formerly thought their run-down heaters were "good enough" have been captivated *and sold* by the handsome appearance of the Richardson Square Cased Warm Air Heater.

But the installer knows that its beauty is more than skin deep. For under the square outer casing is the same heater that has made Richardson and Boynton famous. No experiment here, but a proven heating success that is reflected in sales.

Let us explain the extra insulation and other additional features of this new heater. Write for full details today.

RICHARDSON & BOYNTON Co

Manufacturers of "Richardson" "Perfect" Heating and Cooking Apparatus Since 1855

260 Fifth Ave.

New York City

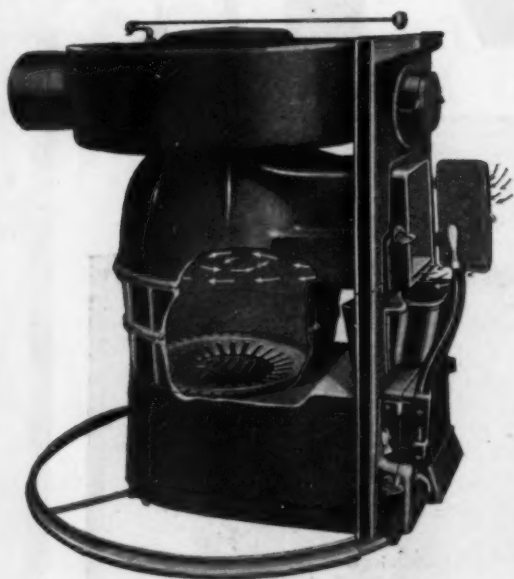
New York Utica Newark Philadelphia Boston

Chicago Buffalo Minneapolis Cincinnati Pittsburgh Detroit

Providence

Mention AMERICAN ARTISAN in your reply—Thank you!

THERE ARE NO CHEAP JOBS WITH A FLORAL CITY FURNACE



THE class of dealers who handle and install Floral City Heaters are never asked for a CHEAP job, they are recognized as trustworthy, reliable furnace men who will not cut prices or skimp work, as their past jobs bring them enough new work so they don't have to.

FLORAL CITY FURNACES are sold only to the better class of dealers—the ones who put quality before price, and whose pride is in their work all the time, and whose customers are boosters instead of knockers.

Dealers who for the past forty years have bought furnaces from us every season are not uncommon on our records—SO THERE MUST BE A REASON for trade of this type.

We will be glad to submit our agency proposition to you if YOU ARE A DEALER, and your territory is not already represented by a dealer. Drop us a line and we are sure we can interest you.

WE SELL ONLY TO THE TRADE.

Officially measured and rated—Complies with the Code—
STOCKS AT CHICAGO AND MONROE.

SOME CHEAPER—NONE BETTER

Floral City Heater Co.

Chicago Office
1654 Monadnock Building

MONROE, MICHIGAN

Detroit Office
4453 Cass Avenue



NOTICE the design of this furnace—it is built especially for soft coal burning.



THE construction of the Ath-A-Nor Furnace is Patented—that is why no other furnace is like the Ath-A-Nor.

THE famous Three-Way Air Blast is not just a smoke consuming appliance—it is a distinct main part of the furnace construction. Actual tests prove the Ath-A-Nor to be smokeless. Sell the Ath-A-Nor—the furnace with genuine fuel saving features. Write for catalog which gives complete description

Ask about the Ath-A-Nor agency—your territory may be open.

The May-Fieberger Furnace Co., Newark, Ohio

SMOKELESS

When writing mention AMERICAN ARTISAN—Thank you!

Heating Merchants Who Are Genuinely Interested In Increasing Profits Will Find the Opportunity in the Sunbeam 4 Point Selling Plan

THE SUNBEAM 4 POINT SELLING PLAN

- 1 the right Product
- 2 the right time-payment plan
- 3 the right Selling equipment ~ ~ ~
- 4 the right Advertising helps



You can Sell Heating in Spring and Summer with the New Sunbeam Financing Terms.

It enables Sunbeam Heating Contractors to compete for business with these dealers, on equal or better terms.

Today, the right kind of payment terms is as important as the right kind of product. The buying public has been educated to make use of its credit. Furnace dealers who take advantage of this condition can obtain a fair share of the money being spent for commodities and luxuries that are not as essential as adequate heating.

Under this new plan, purchasers have as long as two years to pay—or, they can make a down payment now with the first monthly installment not due until September. Carrying charges are low. You receive all your money promptly.

The new Sunbeam Time Payment Plan is designed to give prospects for new Sunbeam Heating Systems the same payment terms that automobile, radio, and other dealers offer.

Whether your assets are large or small, Sunbeam will finance your sales. In this way you can do a volume of business on very limited capital. The requirements are exceedingly simple and can be met by practically every heating dealer.

These better deferred payment terms are only one feature of the Sunbeam Four Point Selling Plan. With the new 1000 Series Furnace, Sunbeam dealers have a product advantage over competitors. The Miniature Aluminum Furnace enables you to show these advantages to prospects in their homes—and come out with the signed order. With the complete assortment of Sunbeam advertising helps you can become the best known heating man in town.

Request complete information regarding this plan. The most casual examination will convince you of its merit. Return the coupon below.

All Dealers—Small and Large—can use the New Sunbeam Time Payment Plan.

THE FOX FURNACE COMPANY, Elyria, Ohio

Largest Makers of Heating Equipment in the World

The Fox Furnace Company,
Elyria, Ohio.

Please provide us with complete information about the new

Sunbeam Four Point Selling Plan. Send along a copy of the 40-page Heating Manual and Catalog.

NAME
ADDRESS
CITY and STATE.....

A-6

A New Broom Sweeps Clean

When your sales story gets so old that you no longer tell it with enthusiasm, it is no wonder that you begin to slip in sales.

To make a really live, convincing sales talk, you have first got to sell a modern furnace, like the new Series "C" Moncrief.

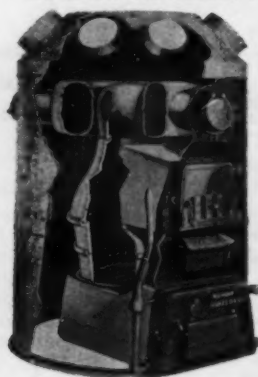
Moncrief Dealers have proved the effectiveness of the new Series "C" story in getting business. It will do as much for you. Try it and see.

Write for all the facts.

The Henry Furnace & Foundry Co.
3471 E. 49th St., Cleveland, O.

DISTRIBUTORS:

Carr Supply Co., 412 No. Dearborn St., Chicago, Ill.
August Bery & Son, Mack Ave. at Drexel, Detroit
The Henry Furnace & Foundry Co., Pittsburgh, Pa.
Frontier Water & Steam Supply Co., 366 Oak St.—
481 Elliott St., Buffalo, New York.



Johnson Furnace Co.,
Kansas City, Mo.
E. A. Higgins Co., 1112
Douglas St., Omaha, Neb.
Moncrief Furnace Co.,
Atlanta, Ga.
Moncrief Furnace &
Mfg. Co., Dallas, Texas.
E. W. Burbank Seed Co.
29 Free St., Portland, Me.
J. F. Conant Ry. Term.
Warehouse, Troy, N. Y.
Wilkes-Barre Hdwe. &
Stove Co., 18-20 So.
Washington St., Wilkes-
Barre, Pa.
The Crawford Heating
Co., Steubenville, Ohio.
The Henry Furnace &
Fdy. Co., 923 Summit
St., Toledo, Ohio.

EASTERN OFFICE
Room 1306, 11 W. 42nd
St., New York City
E. L. Garner, Manager

MONCRIEF FURNACES

*The large increase
in Wise business
has again proved
Wise leadership in
bringing out—*



WISE OPEN DOME
CAST FURNACE

A Better Fire Pot



WISE 20 SERIES CAST
FURNACE

A Better Radiator



WISE STEEL FURNACE

A Better Steel Furnace

FIND out now all about the Better Wise Steel Furnace and the big improvements on the famous Wise Cast Furnaces—Write for special broadsides and our new Catalog No. 23, just off the press, which illustrate and describe Wise furnaces and these new improvements in detail.

The Wise Furnace Company
AKRON, OHIO

A Blue Ribbon Winner

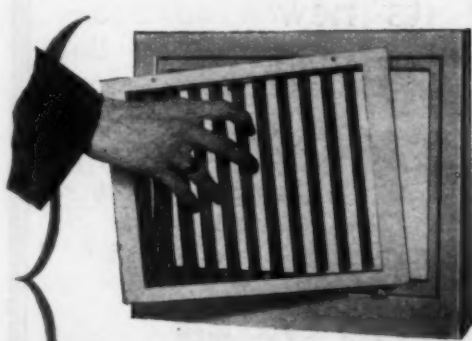
because ↘

it's a finer register of distinct design—for the better class installations—yet it costs no more than ordinary registers—

New Standard

STEEL BASEBOARD
REGISTER

The only register that looks different and is different—the easiest register to keep clean ↘



THE face of the New Standard is secured by two screw heads and is easily detachable. The operation is extremely simple and fault-proof. Shutters are of polished steel and finished same as register. The easiest register to keep clean. Constructed of the highest grade durable material and made in all sizes to conform to the Standard Code.

THIS unusually attractive register is the result of a new idea—very simple yet practical.

Notice how the register, with shutters open, allows the maximum air capacity with the least possible air resistance. When shutters are closed it has the very neatest appearance.

The Standard Code was the inspiration for this register—that's why the *New Standard Register* is so fine—it conforms to the Code in sizes, design, principles and quality.

A popular register—a guaranteed register—write for catalog and prices today.

WATERLOO REGISTER CO., Waterloo, Iowa

Seattle, Wash., Office, 2211 1st Ave.

Announcement



TO settle the estate of the former owners of the Stearns Register Company the business has been sold by the Trustees to—

Russel O. Springman

who is now in active charge.

Stewart L. Coxford

for several years in charge of the business remains in this capacity as

General Manager

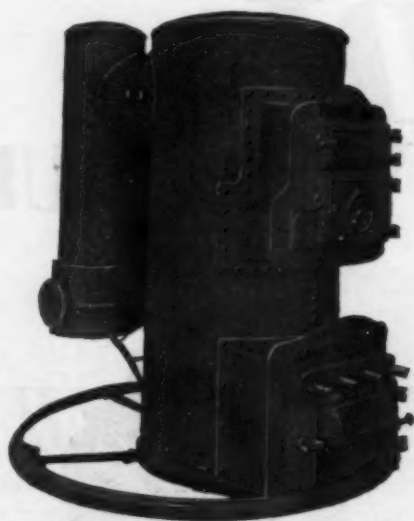
The Stearns Register Company will enlarge its activities under its new ownership and be of greater service to the trade.

THE STEARNS REGISTER CO.



1234 M. Elliott Ave.

Detroit, Michigan



Admirable!

*You'll Admire Its Construction
Users Admire Its Performance*

The new Front Rank Furnace looks good from the very start. Not only that—it will bear your closest examination. And its users will agree with you for 20 years or more.

We still have openings for GOOD furnace dealers. Write us today for details, and copy of

This Fine Catalog

—one that will help you sell more furnaces to more satisfied customers.



LANGENBERG MANUFACTURING CO.
4545 Euclid Ave. St. Louis, Mo.

Makers of



Ratings Certified by N. W. A. H. & V. A.

1888 40 YEARS OF CONTINUOUS SERVICE 1928

MR302

Superiority Comes in Grate Measure

MEASUREMENT with a rule will establish the superiority of the Lincoln dust and gas proof furnace. In essential parts—the grate, heating surface, fire-pot, radiator, feed section, fuel and ash doors—full proportion gives the Lincoln exceptional heating capacity.

Ease in operation is secured by an upright shaker handle plus ball-bearing duplex grates. Unstinting use of pure pig iron in the construction of the Lincoln assures dependability and efficiency.

To help you sell, we offer:

1. First of all, a complete line of heating units that are **RIGHT**.
2. Dealer helps in advertising.

Lincoln Superiorities

1. A Heavy, Oversize Furnace
2. Feed Section thru Front
3. Two-piece Slotted Firepot
4. Covered Joints Thruout
5. Deep, Roomy Ashpit
6. All Collars Cast On
7. Full-proportion
8. Upright Shaker Handle



For complete information, address
Dept. 300

**The American Foundry and
Furnace Co.**

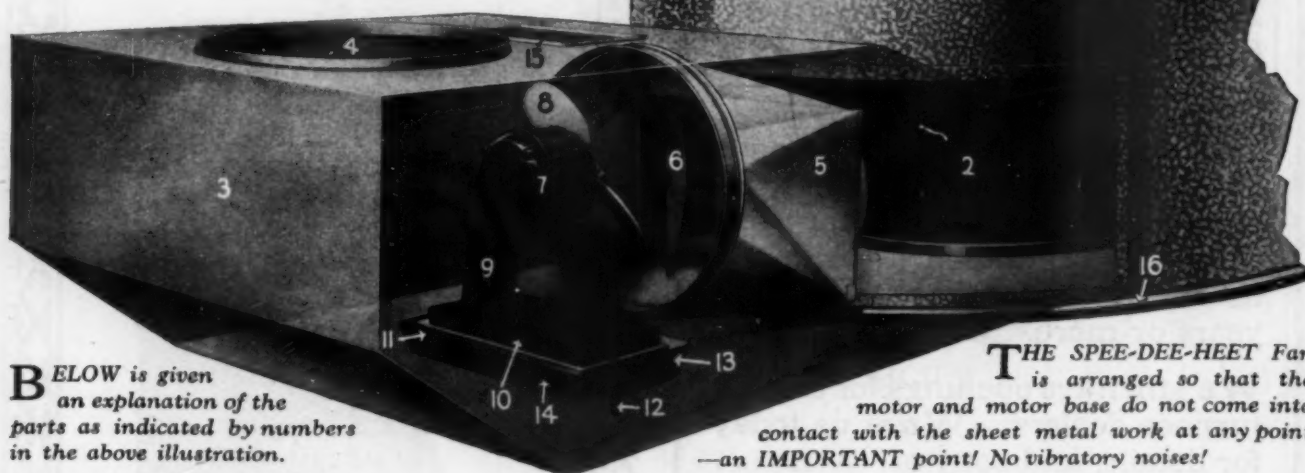
Bloomington, Illinois

Efficient

and **VERY QUIET**

SPEE-DEE-HEET FURNACE FAN

NOT a booster fan—but a positive pressure fan! The air duct is always open, nothing to obstruct gravity flow at any time. Stream-lined delivery of air thru the patented SPEE-DEE-HEET Nozzle with its Air-splitters eliminates back-pressure. No need of dampers or louvres that may fail to work. SPEE-DEE-HEET Furnace Fans are made in twenty-four sizes—suitable for any warm air furnace installation.



BELOW is given an explanation of the parts as indicated by numbers in the above illustration.

- (1)—Furnace casing.
- (2)—Furnace ashpit.
- (3)—Cold air shoe, or stub—almost any style may be used.
- (4)—Collar for cold air return—any number may be used.
- (5)—The SPEE-DEE-HEET Nozzle—a patented and exclusive feature. Prevents back-pressure at the source, and offers no resistance to gravity flow.
- (6)—One of the Air-splitters. They serve to distribute the air within the casing, and also to prevent back-pressure.
- (7)—The SPEE-DEE-HEET Motor—built especially for the unit.
- (8)—The SPEE-DEE-HEET Aeroplane Blade—the most efficient air-moving blade known. Made

THE SPEE-DEE-HEET Fan is arranged so that the motor and motor base do not come into contact with the sheet metal work at any point—an **IMPORTANT** point! No vibratory noises!

- with four and eight blades in the larger sizes—all cast aluminum.
- (9)—The SPEE-DEE-HEET Motor Base. Of heavy steel, designed to eliminate resistance to air passage.
- (10)—Heavy felt pad.
- (11)—Wood Block, if necessary to raise fan center.
- (12)—Two expansion cases and bolts are furnished, as well as all necessary bolts, nuts, etc.
- (13)—Note the flange turned down inside the cold air shoe, so that the motor and base may be installed without touching the sheet metal duct. This is a simple operation.
- (14)—Extra heavy felt pad is furnished.
- (15)—Slide for motor oiling.
- (16)—Base ring of furnace.

WRITE TODAY FOR MORE INFORMATION

THE WILLIAMSON HEATER COMPANY

399 W. 5th St. • CINCINNATI • U. S. A.

When writing mention AMERICAN ARTISAN—Thank you!

I

*It is a pleasure to work
with Furnace Manufacturers and Dealers
for the Development of New Markets.*

WE cannot help saying again that we are extraordinarily appreciative of the interested manner in which every furnace manufacturer with whom we have discussed the subject views the new markets opened by Forced Air Heating.

At first it was but natural that everybody should feel that we were more interested in grinding our axe than in grinding theirs. That was a perfectly sound analysis of the situation, logical and direct, but it overlooked one factor, which is this: *we can never sell a fan unless a furnace is first sold.* That is to say, our particular product has no usefulness unless coupled with the idea of a warm air heating system.

We saw that clearly. Without that vision we could never have started.

And where we have had opportunity to personally discuss the matter it immediately became apparent that our efforts would bear fruit for the advance of the entire industry. For some months it seemed as if it would be necessary to call upon all manufacturers personally to get them to grasp the complete idea—that our promotional ideas were not wholly selfish.

But suddenly it has become realized—seemingly by the entire industry at once—that our efforts are sincerely helpful and a perfect flood of cooperation has been pouring in upon us. State after state has sent its written testimony to the value of this *business expanding idea.*

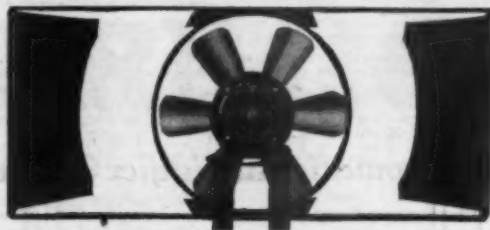
Manufacturers who a year ago were compelled to be apparently indifferent, while

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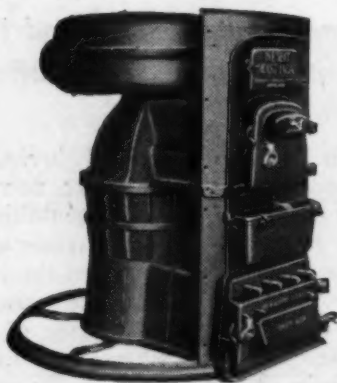
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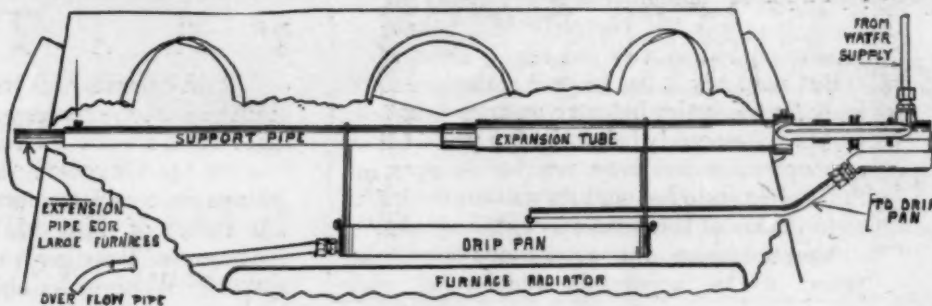
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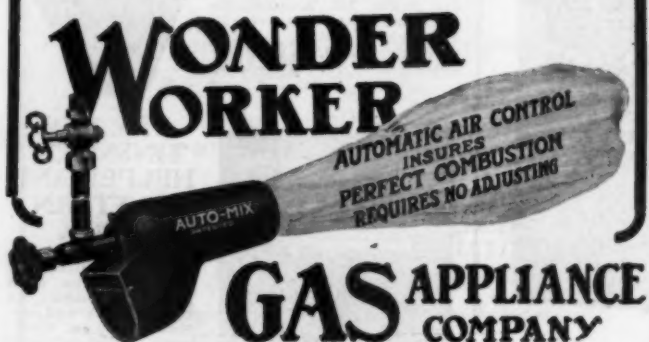
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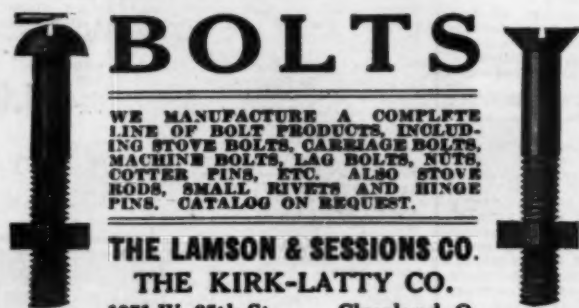
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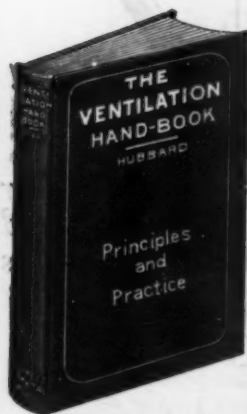
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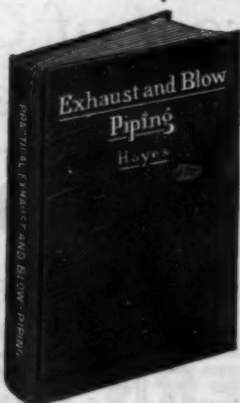
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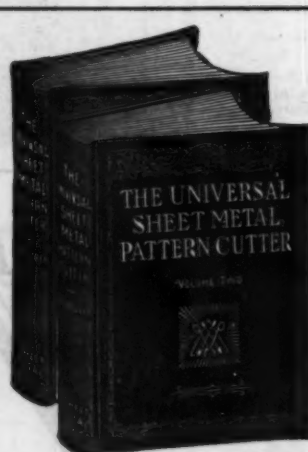
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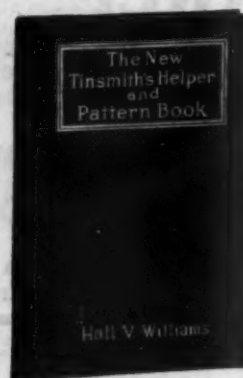
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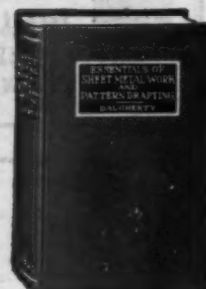
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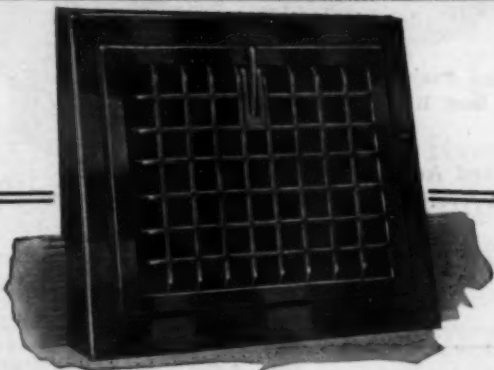
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American Artisan

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CHICAGO, MAY 26, 1928

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I am the most desirable thing in life. Without me no one can be healthy, happy or useful.

The hidden wealth and vast resources of this earth would have no value without me.

I am the great developer of man. No other agency has called forth so many of his hidden treasures, developed more power of mind and body than I have.

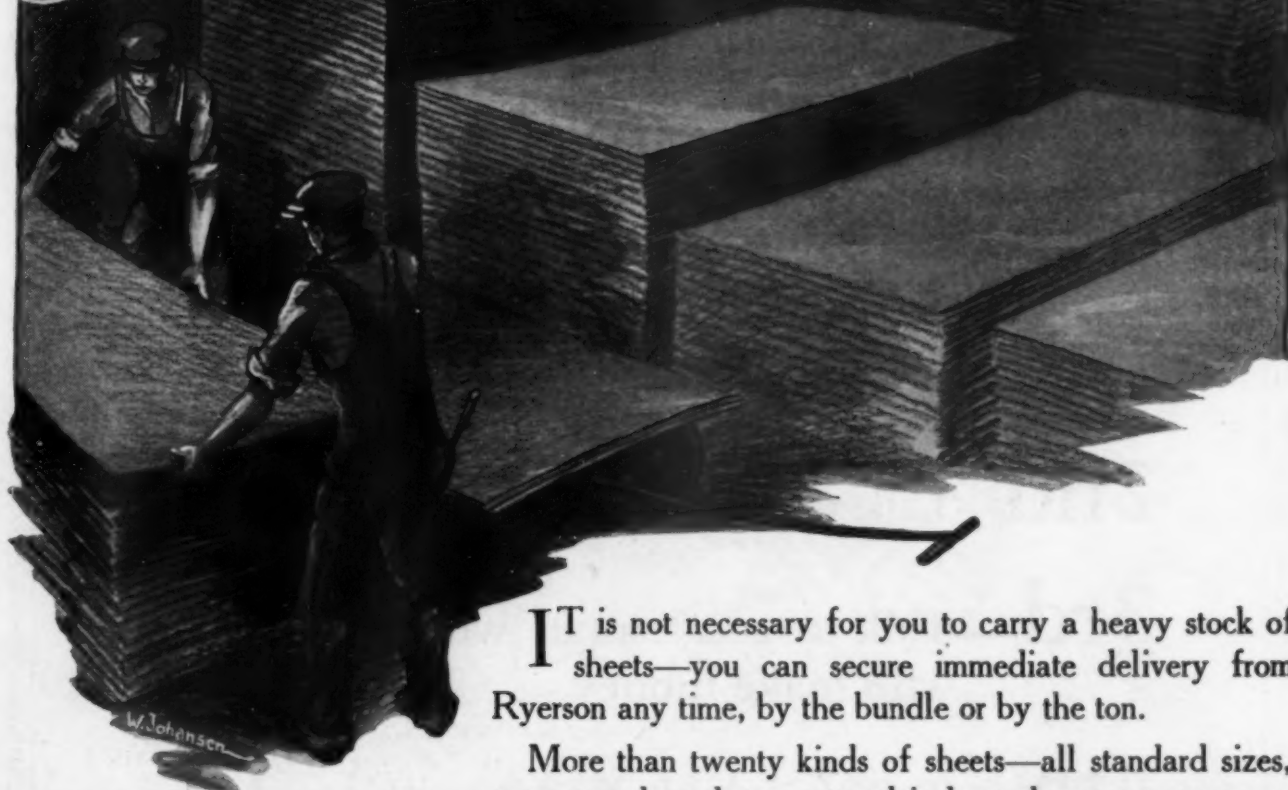
Men and women who try to get along without me are characterless, selfish, undeveloped, useless and unprofitable members of society. I am behind every fortune, every art and science, every achievement, every triumph of man.

Rich men and poor men alike often try to find substitutes for me, hoping thereby to secure a larger measure of happiness, peace, and satisfaction, but they are always bitterly disappointed. Instead of gain, every substitute for me brings them infinite loss.

As the creator is greater than the creature, so I am greater than wealth, power, fame, learning, or any other acquired possession or quality of man, because I am the source through which he acquired them.

I am—Work.

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Bars, Angles, Channels, Rivets, Bolts, and all other steel products which the sheet metal worker uses, can be delivered immediately from stock. See the current issue of the Ryerson Journal and Stock List for sizes carried at the various plants.

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Vol. 95

CHICAGO, MAY 26, 1928

No. 21

**Paul Biersach Wields
Wicked Gavel as He Opens
Sheet Metal Convention**



National Association Sheet Metal Men Seek to Improve Relations With General Contractors

Albert J. Wagner, Chicago, Wins Honors in Sheet Metal Estimating Contest at Cleveland Convention

By GEORGE DUERR

TRADITION, or perhaps it is just that good old-fashioned "glad-to-get-back-feeling," seems to have established the precedent among sheet metal contractors, who are members of the National Association, of paying a visit to Cleveland about every ten years. The first convention was held there in 1907. In 1917 Cleveland again played host to the sheet metal men, and May 22 to 25 this year, eleven years later, this fair city again does honor. And the unbounded hospi-

ality Cleveland always shows its guests makes a convention there an unforgettable pleasure.

Chicago took honors for first place in attendance, there being about 40 present from that city. Louisville, who played host to the convention two years ago, sent 26. Birmingham was represented by 16. Milwaukee had six delegates, etc., making the convention, from the point of attendance, equal to any other held in recent years.

The formal session of the conven-

tion was opened Tuesday afternoon in the ball room of the Hotel Statler. Geo. Thesmacher, chairman of the Cleveland Convention Committee, presided, introducing William R. Hopkins, city manager of Cleveland, who welcomed the delegates to the city and gave them every assurance that the city was happy to greet them. He stated that he was glad to see the large turnout to the convention, because, he opined, "If competitors are not actually the best of friends, they are at least valu-



Jimmy Miles Brings All the Fan Dope

able associates. Coöperation is the only perfect basis for competition. By coöperation waste and mistakes are eliminated, and the industry is expanded. Association work makes it possible for an industry to increase its power to serve, and after all, that is what makes for the greatest happiness. Industries are just now finding out that the ability of the American people to assimilate the fruits of production has no limit, and therefore every industry should strive for greater perfection. This can only come about through close coöperation within the industry itself."

The response to Mr. Hopkins' splendid address of welcome was made by President Paul L. Biersach, who thanked Mr. Hopkins on behalf of the association for his very cordial welcome.

Vice President Laurence Slotmeyer of the Cleveland Builders' Exchange, the largest Builders' Exchange in the United States, extended a cordial invitation to the

members to visit the Builders' Exchange headquarters.

W. H. Dailey, President of the Ohio State Association, was to have spoken, but on account of a death in his family was unable to be present during the opening session.

Frank J. Hoersting, Ohio State Treasurer, and Mr. Abbott, State Secretary, were present and were introduced.

John Vogeli, Vice President Ohio State, had died recently.

A very spirited address, which proved there is no sportsmanship in doing business without a fair profit, was made by Lee Gillespie, President the Ohio State Salesmen's Auxiliary.

A. W. Howe, chairman of the Entertainment Committee, was introduced and he outlined the program of entertainment that had been arranged for both the men and women.

J. E. Merrick made a report of the By-Laws Committee, a new set of by-laws for the association hav-

ing been drafted to replace the old, on account of obsolescence of the latter. Action on the by-laws was deferred until a later session of the convention.

Committees Appointed

Committees appointed by the Chair were as follows:

Nomination: W. A. Fingles, Baltimore; John A. Pierpont, Washington, D. C.; Ben J. Kolbenschlag, St. Louis; Mr. Lieberman, Ambridge; Mr. Luckhardt, Pittsburgh; Samuel Warren, Erie.

Resolutions: E. B. Langenberg, St. Louis; P. Biegler; O. Geussenhainer, Sheboygan, Wisconsin.

Credentials: W. E. Feisten, Henry Blecking, A. B. Rysdon.

Auditing: John A. Pierpont, J. E. Merrick, J. C. Gardner.

Then came the annual reports of officers—President, Treasurer. The latter was made by National Treasurer Jules Gerock. President Biersach's address follows:

Annual Report of President Biersach, National Association of Sheet Metal Contractors, Cleveland Convention, May 22nd-25th, 1928.

In an association such as ours, where the greater part of the business is transacted through the secretary's and treasurer's offices, the report of the president can easily be dispensed with without any serious loss to the convention. However, between convention times considerable matters of importance continually appear upon the scene, so that a few words upon my part may be of interest to you and consequently not out of place.

Encyclopedia Sheet Metal Works

Undoubtedly the most important work confronting us is this particular proposition, the last report on which was made at the Dallas convention, was more than enthusiastically received at that time and unlimited support promised in every respect by the membership. What happened? George Harms and co-workers, who have this work in charge, proceeded with the same with untiring effort and he will, for his committee and during this convention, submit a more complete

report on their labors. But the enthusiastic financial support promised at the last convention did not materialize, only a few luminous satellites of our organization exercising cooperation. If you want this important work completed shortly, you must practice undivided cooperation, especially in a financial way, in this undertaking.

National Sheet Metal Contractor

Since our last convention we have consolidated the editorial and business sections practically under one roof. Formerly the business end was conducted from the offices of our national secretary in Pittsburgh, and the editorial and printing was being done at Columbus, Ohio. A meeting was called in Pittsburgh by the chairman of the publication committee, which was attended by your publication committee, your president and secretary, and after going into the matter carefully and considering all conditions from all angles, it was decided to perfect this consolidation of business and editorial sections by removing the Columbus section to Pittsburgh, thus not only being in a position to render better service, but with considerable saving in the operating expenses. The contractor is a money maker for us and our real financial backbone.

Organization

Unfortunately this important work could not receive such attention as desired and required, owing to the enormous amount of work confronting our national secretary in connection with our publication, and then our finances did not permit expenditures for such work, as the major portion of our income was expended on our "Encyclopedia on Sheet Metal." It seems to me that provision should be made for the employment of a field secretary, under the supervision of the national office and officers, who could devote his entire time toward organization problems; this, of course, could only be successfully accomplished provided financial arrangements could be made for the employment of such a field secretary and the defraying of expenses in connection

therewith. At the last convention it was suggested members of the Board of Directors be allotted certain sections or regions in which they were to perform organization work. These sectional or regional custodians were appointed by your president and they will be called upon to report on their stewardship some time during this convention.

Finances

Our income apparently does not seem to be large enough to permit us to expand as rapidly as we should and would like to, and it might be advisable to devise ways and means for the raising of additional funds either through the raising of our dues or by assessments.

New Constitution and By-Laws

Your committee who has this in charge has worked diligently on the same and is prepared to submit to you for your consideration and adoption a new draft. Our present constitution and by-laws are obso-

lete. They do not fulfill the requirements of the present day. You should, therefore, enact this new draft as submitted by your committee, provided you find that the same will meet your wants.

Conferences

During the past year we were called upon to enter into conferences on matters appertaining to our industry. Such conferences brought us in close contact with such organizations as:

1. National Association of Affiliated General Contractors.
2. Modern Home Bureau (just recently organized).
3. Mooseheart, Ill., Apprenticeship training.

To all the invitations received for such conferences a willing ear was given and your president appointed, from time to time, members of our national association from cities where these conferences were held, with hardly any expense to our organization. These committees will



Art Lamneck in His Favorite Pose



Harvey Manny Pulls Away from His Fishing

make their report to this body for your consideration and disposition.

Uniform Mechanics' Lien Law

Undoubtedly some of you know that the national government is submitting a tentative *Uniform Mechanics' Lien Law*, in which the whole building industry should be interested, to the various organizations and states throughout the country, with the expectations of having such a law become operative some day and then all the conflicting lien laws of the various states can be abolished and all contractors will be in a position to adjust themselves easily to a national law of this kind. This work is under the direct supervision of the Department of Commerce, Washington, D. C. It might be well to have a committee appointed to look after the interests of our membership.

Sheet Steel Trade Extension Committee

During the past year we have received constructive cooperation from

the officers and employees of this organization. They have not only contributed their services, but also their time and money for our benefit. The splendid "Certificate of Membership" is their creation and contribution to our association. They have ever a watchful eye and ear for the advancement of our cause; spreading favorable propaganda, introducing ordinances in various parts of the country on uses of metal products and scrutinizing tests and instruction papers on sheet metal work used in schools. We certainly appreciate the efforts put forth by them for the enhancement of our industry.

Committee Activities

Your president was obliged to call upon quite a few members to represent us at conferences and meetings, and all those that were practically drafted for such work responded cheerfully. It is my desire to express at this time my appreciation and sincerest thanks for their kind cooperation.

In conclusion: I have endeavored to cover only a few of the "High spots" and leave the major portion of "What's happened" to our secretary and treasurer, both of whom undoubtedly will submit detailed and voluminous reports. I wish to thank my fellow officers for their support and uniform courtesy during the year. It was a great pleasure and privilege in working with them and I am fully convinced and satisfied that no more loyal and efficient men could be found in any organization.

To the members of the association who have honored me during the past twenty years in various ways and in electing me to the highest office in their gift, I can only say that I more than appreciate their loyalty and confidence, and only regret that I have been able to do so little in their behalf. I will always bear their good will and respect, I shall feel that my time has been well spent and I will promise that you will find me in the future, as in the past, always and ever fighting for the common good and for their cause.

National Counselor John A. Pierpont, Washington, D. C., reported on the 16th annual meeting of the United Chamber of Commerce held in Washington a short time ago. He reviewed the activities of the national chamber having a direct bearing upon the sheet metal industry.

Harry S. Rogers, Sheet Metal Trade Extension Committee, made a very spirited address on "Team Work" in the industry and how necessary it is if that industry is to be successful in gaining its objectives. He spoke of the consolidation which had taken place of the National Association of Hot Rolled Steel Manufacturers, the National Association of Cold Rolled Steel Manufacturers and the Sheet Steel Trade Extension Committee, bringing about the formation of the National Association of Flat Rolled Steel Manufacturers. This consolidation Mr. Rogers cited as an example of the "Team Work" about which he spoke. He also called attention to the fact that the committee, upholding its end of the team

work bargain, has spent more than $1\frac{1}{3}$ millions of dollars in promotional work without the expectancy of one dollar's return until the sheet metal contractors have first profited by this enormous expenditure. Mr. Rogers' place upon the program was advanced in order to permit him to leave Tuesday evening for New York, where he was called on a matter of building code revision.

Tuesday evening was given over to an informal party in the ball room of the hotel which included dancing for the delegates and their guests, several specialty numbers by two darkies, and fancy dancing by a young lady from Cleveland. Several circle dances enlivened the evening, the participants and onlookers alike having a world of fun.

Iowa State to Reaffiliate

At the Wednesday morning session it was announced by Secretary Markle that the State Sheet Metal Contractors' Association of Iowa was ready to reaffiliate with the National.

Mention was also made of the new membership certificate which the Sheet Steel Trade Extension Committee had worked up for the association. This certificate is the physical evidence of a pledge to promote the welfare of the public at all times. Hung on the wall of the contractor's office, it is an assurance to the public of the industry's sincere desire to be of the greatest possible service.

Consideration of the contractual relations existing between the general contractor and the sub-contractor was another matter taken up at the Wednesday morning session. Recognition of the need for action of this kind was manifest to the members of the Illinois Sheet Metal Contractors' Association. It was discussed at length at the annual meeting of that body at Rock Island. A committee was appointed to draft a "rider" to be attached to each contract before it was signed by the general contractor or owner and setting forth the conditions under which the sub-contractor would enter into contractual relations with the general contractors, the purpose



E. B. Langenberg Sends Out Some Mean Music

of the document being to eliminate unfair practices. The matter was very ably presented to the National by Harry J. Dettmers. After short debate, it was slightly amended and adopted by the Association. The complete document will be published in a later issue. Entering the discussion on the matter were A. E. Hutchison, Louisville; Jay Smith, San Antonio; George I. Ray, Charlotte; J. E. Merrick, Louisville; George Harms, Peoria; Louis Luckhardt, Pittsburgh.

Trade Development Book to Be Out in September

The remainder of the morning was given over to George Harms, Chairman of the Trade Development Committee. Mr. Harms opened with a short history of the origin of the committee and its activities; which, of course, soon brought him to the subject of the Trade Development book. Mr. Harms stated the reason for the delay in bringing the book out was

the lack of money to carry on the work of getting the material into shape and the mechanical work of publication. He stated that the book, when complete, will consist of twelve sections.

As an indication of the status of the work at the present time, Mr. Harms said that the cornice section is already complete, consisting of 125 pages. This section has already sold much cornice work. The furnace section will consist of 100 pages, showing every kind of an installation. This section is being brought thoroughly up-to-date with the latest data on the Standard Code. It will be ready about September 1st if the necessary money is forthcoming, this amount being about \$20,000. Twenty-six thousand dollars has already been spent on the work thus far.

The Skylight and Ventilating section is all completed.

The Roofing section will require another 60 days.



George Harms Comes to the Convention

Work on the Metal Ceiling section, the one on Fire Doors, and the section on Metal Windows is all in good shape. So that the entire work will be completed with reasonable certainty by September 1st.

Subscription blanks for the book were passed out and the necessary money pledged for the continuance of the work procured. Mr. Harms was given a rising vote of thanks for his persistent effort in getting the work out.

W. S. Hays, National Slate Association, spoke briefly on the practicability of saving time and traveling expense by making convention dates of the different associations coincide more nearly than they now do. He also urged hearty cooperation and team work within the association.

Committee Nominates

The Nominating Committee made the following recommendations: President, Paul L. Biersach; 1st Vice President, J. E. Merrick; 2nd Vice President, Geo. I. Ray; 3rd Vice President, Harry Stanyer; 4th

Vice President, M. F. Lieberman; Treasurer, Jules Gerock; Sergeant-at-Arms, O. W. Bragan. Trustees, George Harms, W. E. Feiton, Max Walton.

Wednesday afternoon session opened with the reading of a telegram from Syracuse inviting the 1929 convention to that city.

In the absence of W. H. Finney, Louis L. Rysdon made the report of the Overhead Expense Committee. At the close of this report Mr. Rysdon presented the following overhead expense tabulations on a business for the years 1926 and 1927 and asked whether or not any of the items had been omitted that the tabulations should have contained under ordinary circumstances:

Overhead Expenses for Year 1926

Volume of business during 1926	\$266,880.59
The following items are overhead expenses for year of 1926:	
Taxes on factory and lots	\$ 1,046.30
Salary for labor for upkeep of office and factory	1,200.00
Insurance	1,705.12
Drayage and express charges	1,978.05
Auto repairs, oil and gas	349.68
Phone	338.36
Watchman service	72.00

Electric light and power	477.92
Fuel	693.81
Repairs on tools	172.84
Water tax and license	65.69
Commissions and lawyers' fees	196.25
Advertising and stationery	223.55
Interest on borrowed money	464.57
Gifts	350.00
Association dues and assessments	545.00
General expenses and stamps	1,096.09
Salary for office labor	14,465.88

Total	\$25,441.11
\$24,260.00 invested in building at 6%	\$1,455.60
\$15,653.49 invested in machinery at 6%	939.21
Depreciation on building and ground less 2%	485.20
Depreciation on machinery and equipment, less 6%	939.21

Total 3,819.22

Cash invested in business, \$42,659.93, interest at 6%	2,559.59
--	----------

\$31,819.92

Productive labor, \$139,921.00 = about 23% overhead.
Volume of business, \$266,880.59 = about 12% overhead.

Overhead Expenses for Year 1927

Volume of business during 1927	\$208,801.87
The following items are overhead expenses for year of 1927:	
Taxes on factory and lots	1,009.92
Salary for labor for upkeep of office and factory	1,460.00
Insurance	1,049.39
Drayage and express charges	1,345.75
Auto repairs, oil and gas	681.52
Telephone	406.20
Watchman service	72.00
Electric light and power	630.35
Fuel	303.43
Repairs on tools	209.26
Water tax and license	69.76
Commissions and lawyers' fees	254.50
Advertising and stationery	477.03
Gifts	431.60
Associations dues and assessments	300.00
General expenses and stamps	1,848.56
Salary for office labor	12,624.00

Total	\$23,173.54
\$24,260.00 invested in building at 6%	\$1,455.60
\$18,519.99 invested in machinery at 6%	1,111.20
Depreciation on building and ground, less 2%	485.20
Depreciation on machinery, less 6%	1,111.20

Total 4,263.20

Cash invested in business, \$52,848.76, interest at 6%	3,170.93
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\$30,607.67

Productive labor, \$109,037.87 = 28% overhead.
Volume of business, \$208,901.87 = 14 1/4% overhead.

Considerable discussion followed which resulted in revealing the fact

that overhead expenses increase about as living expenses increase.

Zay Smith, Edie Sheet Metal Works, San Antonio, stated that their method of handling overhead was first to take 40% of the productive payroll, then 10% on material and then an additional 25% for profit.

Otto Guessenhainer stated that where the overhead is calculated on productive labor, this figure must also include the hours of unproductive labor. The entire discussion proved very instructive to all.

Bennett Chapple, Vice President of the American Rolling Mills, addressed the assembly on "What Is Wrong with the Sheet Metal Industry." This address appears elsewhere in this issue.

Chicago Takes Honors

The remainder of the afternoon was taken over by the estimating of a sheet metal job on an ordinary residence. The bids included that of the outside sheet metal work and the warm air furnace installation. Members were presented with plans and specifications of the house from which they were to make their estimates and submit their bids. An official figure had been established previously by two Cleveland sheet metal contractors.

The official bid on the sheet metal work was \$196.25. The nearest bid to that was submitted by Albert J. Wagner, sheet metal contractor of Chicago.

Mr. Wagner's bid was \$198.77. Mr. Wagner won a box of cigars.

The official bid on the furnace installation was \$473 and Charles Spindler won the box of cigars by submitting a bid of \$490.

In the evening the delegates were treated to a trip to Keith's Palace theatre.

The Thursday morning session was given over to the Ohio state association, and the meeting was presided over by George Snider, appointed to act as chairman, due to the absence of President Dailey, Vice President John Vogeli having died. There were 38 members present.



The Twins—Gerock & Symonds

A resolution was presented by P. E. Sullivan which was adopted as follows:

"At a meeting of the Master Sheet Metal Contractors' Association, of Dayton, Ohio, which Association is a member of the State and National bodies of Sheet Metal Contractors, the following resolution was passed by unanimous vote:

Resolution

"Resolved, That this Association recommend to the Ohio Association the working for the passage of a law in the State of Ohio, requiring certain standards for the installation of warm air furnaces, for the licensing of the installing contractor, for the creation of an inspection department, for the inspection of all furnaces installed within the State of Ohio, and for penalties for the violation of such law; be it further

"Resolved, That the Legislative Committee of the State Association of Sheet Metal Contractors be instructed to proceed at once to prepare legislation to that effect to be presented and introduced at the next session of the Ohio Legislature,

which meets at Columbus in January, 1929; be it further

"Resolved, That Artie A. Smith, P. E. Sullivan and B. R. Rieck be appointed as a committee to represent the Dayton Association before the State body and to present the foregoing resolutions."

ARTIE A. SMITH,
P. E. SULLIVAN,
B. R. RIECK,
Committee.

Resolutions of sympathy were voted to be sent to President Dailey on the death of his brother-in-law and mother. A floral tribute was also voted sent.

Election of Officers

The officers elected were as follows:

President—A. E. Bogen, Columbus.

Vice President—Joe Dersher, Toledo.

Treasurer—Frank J. Hoersting, Dayton.

Appointment of the secretary is to be left to the Board of Directors.

The Directors are as follows:

For three years, William Festen,

Cleveland; Adolph Munkle, Columbus; Charles Grotte, Cincinnati.

For two years, P. E. Sullivan, Dayton; James Shaw, Zanesville.

A rising vote of thanks was given Cleveland. Columbus will hold annual outing June 8.

Michigan May Reaffiliate

On Thursday afternoon Harry Rhodes, Grand Rapids, Michigan, Past President of the Michigan Sheet Metal and Roofing Contractors Association, spoke on the "Furnace Business from Various Angles." At the outset Harry stated it to be his opinion that the local association is of prime importance in organization work. It is in the local association that are taught good fellowship, better business methods, what cost is, what better business ethics are and how to consider the moral aspect rather than the legal right.

Mr. Rhodes favored furnace manufacturers withdrawing all guarantees, it being his opinion that the local dealer should sell the product of his own creation.

They should advertise the creations of their own ability in preference to that of another. He favored state legislation as a means of getting the Standard Code adopted rather than local legislation.

The furnace business, according to Mr. Rhodes, is on the verge now of an era of tremendous expansion, and in this expansion the steel furnace will displace the cast furnace.

In order to succeed in business today the dealer must be a 4-horse team—he must have ability, ambition, loyalty and vision to see new fields ahead, according to Mr. Rhodes.

In regard to the branch, it is not economically sound except in a very rapidly growing community, because of the high overhead.

Guy Voorhees, Indianapolis, reported on the Warm Air Furnace Committee, recommending that all sheet metal men who install furnaces become associate members of the National Warm Air Heating Association so as to take advantage of the assistance which the Better

Business Committee of that association will shortly be rendering furnace dealers.

E. B. Langenberg reported favorable progress made in garage heating with warm air and suggested that all furnace men get a copy of the report of joint committee on the subject from the National Board of Fire Underwriters.

The election of officers resulted as follows:

President—Paul L. Biersach, Milwaukee.

First Vice President—J. E. Merrick, Louisville.

Second Vice President—George I. Ray, Charlotte.

Third Vice President—Harry Stanyer, Dallas.

Fourth Vice President—M. F. Lieberman.

Treasurer—Jules Gerock, St. Louis.

Sergeant-at-Arms—O. W. Bragan, Birmingham.

William Feiten and O. E. Hutchison were tellers and the election was spirited.

The next convention city was designated as Baltimore.

In reference to consolidation with state associations, it was the consensus that some effort should be made to have the conventions at the same time and in the same city, not necessarily in the same hotel, if for no other reason than that expenses could be reduced and time saved by members who wish to attend all the conventions.

Harry J. Dettmers reported on the progress being made in the Allied Construction Industries Committee, stating that the general and sub-contractors have progressed to a point where they will soon begin to iron out some of the many differences and grievances they have.

It was voted to continue the committee's activities in this work. There have been three meetings, one in Cleveland, one in Chicago and one in Washington and the fourth will be held in Detroit the latter part of June.

Mr. Dettmers also presented the

proposed plan of J. A. Brandt to establish at Mooseheart, Illinois, a research laboratory for the purpose of developing material suitable for use by instructors in teaching sheet metal work. The proposition asked for an appropriation of \$2,000 from the association.

A resolution was passed, after considerable discussion, to the effect that the association is not at the present time in a position to enter the financing of such a plan, although it is in full sympathy with the plan. At the present time the association is able to extend only its moral support to the proposition, granting at the same time that it is a worthy cause.

Mr. Dettmers was given a rising vote of thanks for his work as Chairman of the committee and asked to continue to keep the association informed on the matter in the future.

The banquet held at the Hotel Statler Ball Room was attended by enthusiastic members and their wives. The entertainment was outstanding. Frank Mullholland gave an interesting and instructive after dinner speech on "We Live in a Marvelous Age."

Mrs. Biersach, wife of the esteemed President, was presented with a necklace and bracelet to match that all the women said was simply darling.

During the dancing that followed the banquet Mrs. Philip Lenderking favored the crowd with two songs. The applause showed that everyone enjoyed Mrs. Lenderking's lovely voice.

Mr. and Mrs. A. W. Howe and their Cleveland committee that had charge of the entertainment deserve unstinted praise for the successful function. The women that attended were entertained at luncheon at the Hotel Wednesday, and attended Keith's Theater for the evening performance.

Thursday they were taken for a tour of the city, followed by luncheon at the Acacia Country Club. The Cleveland committee certainly left no stone unturned in providing delightful entertainment for all.

To show the appreciation for the many years of service and inspiration that Joseph Gardner has given the association, a wrist watch was presented to him during the Friday morning session.

H. J. Dettmers, Chairman of the Code of Ethics Committee presented a code that was adopted by the association. If we all live up to it what a land of milk and honey this will be for all sheet metal contractors. W. F. Angermeyer, Chairman of the Labor Committee, reported for his committee. The changes in the By-laws were adopted. These will help the organization function more smoothly.

The following resolutions were put before the meeting: On Formation of Association Contact Bureau; Mechanics' Lien Law; appreciation of the successful work of convention committee and also the Ladies' Committee was voted. The Trade Press and Hotel Statler were thanked for their cooperation; and all stood in memory of the various members who have died since the last meeting.

After discussion it was voted to increase the dues to \$12.00 a year.

Ohio Auxiliary Held "Peppy" Meeting During National Convention

Claiming to lead all State Auxiliaries in membership and in finance, the Ohio Travelers met Wednesday morning, May 23rd, at the Hotel Statler, Cleveland.

The meeting was devoted to routine work and election of officers for the ensuing year. Those chosen to guide the Auxiliary for the coming year are:

President, G. L. Potter, Van Wert; 1st Vice President, S. A. Schwarz, Cleveland; 2nd Vice President, Frank J. Ruehrwein, Cincinnati; Secretary-Treasurer, Lee W. Gillespie, Cincinnati; Sergeant-at-arms, C. T. McGough.

Directors, who are selected by the officers, will be announced later.

The Auxiliary roster for 1928-1929 is in course of preparation and will be distributed shortly.

Are You 100 Per Cent Standard Code?

The Standard Code, developed and sponsored by the National Warm Air Heating and Ventilating Association, is one of the most important steps ever taken in the warm air furnace industry.

It puts warm air heating on a sound, scientific basis. It enables every dealer to know that he is making installations which will earn the confidence and approval of his customers. It is the keystone in an arch of public good will upon which rests the further development of the industry.

Every Standard Code installation strengthens the hold of warm air heating. We believe that every furnace dealer will find it distinctly to his advantage to make nothing but Standard Code installations.—*Fan Facts*.

Miss Mary O'Leary Again Heads National Ladies' Auxiliary

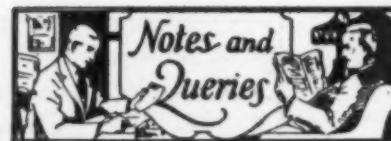
*Popular President Reelected and
Presented With Overnight Bag*

WITH a paid up membership of over one hundred, the Ladies' Auxiliary of the National Association of Sheet Metal Contractors celebrated its first birthday in Cleveland May 23 and 24.

Representatives of the Locals in various cities reported real interest and enthusiasm and predicted an increased membership of at least one hundred per cent before the next meeting.

Officers were elected as follows: Miss Mary A. O'Leary, Louisville, Ky.; First Vice President, Mrs. B. Kolbensschlag, St. Louis, Mo.; Second Vice President, Mrs. Albert J. Wagner, Chicago, Ill.; Third Vice President, Mrs. P. H. Lenderking, Baltimore, Md.; Secretary, Miss Virginia Hutchinson; Treasurer, Mrs. J. W. Bowers, San Antonio, Texas.

In appreciation of their splendid work the past year, Miss O'Leary was presented with an overnight case and Miss Hutchinson with a



Block Tin Pipe, Lead Pipe, Sheet Lead.
From John Balkema and Company,
Lafayette, Indiana.

Please tell us where we can purchase block tinpipe, lead pipe and sheet lead.

Ans.—Gardiner Metal Company, 1356 West Lake Street, and Eagle-Picher Lead Company, 134 South LaSalle Street; both of Chicago, Illinois.

Tomato Guards.

From C. C. Bruscke and Son, Good Thunder, Minnesota.

Where can I buy tomato guards?

Ans.—Vaughan's Seed Store, 601 West Jackson Boulevard, Chicago, Illinois.



Mary A. O'Leary.

silk parasol.

The Chicago Local leads with a membership of thirty. Just prior to leaving for the Cleveland meeting the Chicago ladies entertained the men at a Leap Year party at the College Inn. Nineteen of the Chicago members attended the National meeting.

chimney as c-f. Later figure the circumference of the round pipe, as we did in the drawing for an 8-inch pipe. Divide by 4 to get the quarter circumference, and reduce this about one-eighth inch, and measure it as d-e, d-e'. Observe this is to make the top end a little smaller so the base pipe will set down on it properly.

After this place square in position 3, making f-g equal to half the width of chimney or $6\frac{1}{2}$ inches, and draw line e-g-f. Next drop square in position 4, and so g-h is equal to a-b, and draw the base line parallel to g-f. Repeat this on the opposite side and then put square in position 5 and mark the bevel cut and allow lap, and the pattern is done.

Sometimes the top e-e' is left straight and is cut off after the transition is assembled, as it can be easily trimmed off then. But other men prefer to put the sweep in and so extend the side lines to X, and from X describe the arc. Now this generally cuts the top too deep, so that a tapering pipe must be made to set on, especially if the transition is short. This can be improved upon if you bisect the distance d-y, as d-z, and then sketch the curve e-z-e' free handed. It may not be 100 per cent perfect but it prevents cutting out too much, and later when it is assembled more can always be trimmed off if need be.

The corner of metal that falls off is seamed to the other end and that is made up into a pipe, so no metal is wasted.

Leigh B. Block Now Purchasing Agent of Inland Steel

Leigh B. Block has been appointed Purchasing Agent of the Inland Steel Company, Chicago, effective at once, according to an announcement made this week. He will be located at the Indiana Harbor, Indiant, plant. Mr. Block has been with the Inland for the past four years.

He succeeds J. E. Stafford, who has resigned after sixteen years with Inland. Mr. Stafford will be affiliated with a company handling refractory materials in the Chicago District.

J. M. and L. A. Osborn Co. Keep Open House During National Convention

Not only did J. M. and L. A. Osborn Company extend a cordial invitation to the delegates and visitors at the National and Ohio Sheet Metal Conventions in Cleveland this week to visit their headquarters at 1541-1551 East 38th Street, but transportation was furnished to and from the Statler Hotel.

The spacious offices of the Osborn Company were beautifully decorated with growing plants and flowers and members of the force were on hand to greet visitors, answer questions, etc.

Manufacturers whose lines are jobbed by Osborn were given the privilege of exhibiting and demonstrating their products in the large exhibit hall which adjoins the offices—without expense to them.

It was an interesting and instructive display and those delegates who were foresighted enough to accept Osborn's invitation were unanimous in their expressions of appreciation of the thoughtfulness of their hosts, who even served refreshments and presented the ladies with candy and the men with useful steel pocket tapes.

The following manufacturers demonstrated their products at the Osborn Sheet Metal Show:

Unishear Company—Metal Cutting Machines.
Whitney Metal Tool Company—Punches and Slitting Shears.
Black and Decker Company—Electric Hammers, Grinders and Tools.
Marshalltown Mfg. Company—Lennox Throatless Shears.
Lamson-Sessions Company—Stove Bolts.
Rome Brass and Copper Company—Copper Rivets.
Chain Products Company—Furnace Chain.
H. B. Fuller Company—Asbestos Dry Paste.
Follansbee Brothers Company—Lustro Steel Stove Pipe.
Klauser Manufacturing Company—Perfection Cutoffs.
McCrary Manufacturing Company—McCrary Cutoffs.
Griswold Manufacturing Company—Dampers.
Cleveland Elbow Company—Stove Pipe Elbows.
Hotstream Heater Company—Automatic Draft Regulators.
Independent Register and Mfg. Co.—Grilles, Chimney Flues.
Kain-Peterson Company—Si Fo Ventilators.

Globe Ventilator Company—Ventilators.
Swartwout Company—Ventilators.
Burt Manufacturing Company—Rotary Ventilators.
Standard Ventilator Company—Rotary Ventilators.
Windmotor Company—Ventilators.
Rawl Plug Company—Plugs and Drills.
Niagara Machine and Tool Works—Sheet Metal Machines.
Yoder Company—Sheet Metal Machines.
Gibson-Homans Company—Roofing Ceilings.
Canton Steel Ceiling Company—Steel Ceilings.
American Rolling Mill Company—Armco Sheets.
Parker-Kalon Company—Sheet Metal Screws, Masonry Nails, Damper Quadrants.
Hyro Manufacturing Company—Punches, Solder Iron Handles, Bench Mandrils.
Pecora Paint Company—Asbestos Furnace Cement.
Dreis and Krump Mfg. Co.—Chicago Bending Brakes and Slitting Shears.
Armstrong-Blum Manufacturing Company—Marvel Punch, Shear and Bender.
International Nickel Company—Monel Metal.
American Nickeloid Company—Nickeloid Sheets.
A. H. Robinson Company—Clothes Door Chutes and Heat Distributors.
Una Welding and Bonding Company—Welding Rods.
Ferdinand Dieckmann Company—Copper, Steel and Zinc Elbows.
Berger Brothers Company—Malleable Iron Hooks and Hangers.
Beh and Company—Register Shields.
Harris Calorific Welding Company—Welding Equipment.
Gas Products Company—Acetylene, Oxygen and Calcium Carbide.
Perfection Furnace Pipe Company—Furnace Pipe.
Auer Register Company—Registers.
Superior Sheet Steel Company—Lead Cote, Lead Sealed, Galvanealed and Super Metal Sheets.
Braden Manufacturing Company—Champion Mitres (Copper and Galvanized).
American Brass Company—Copper Sheets.
National Brass and Copper Company—Copper Sheets.
National Machine Tool Company—Shear and Handnibbler.
O. Stewart Company—Iron Downspout Protectors.
Finucane & Macfie, Inc.—Ornamental Conductor Straps of Copper and Zinc.

Productive Ability of Each American Worker Equivalent to 40 Horsepower

Here's how Ambassador Houghton, American representative to the court of St. James, rates the American worker:

"In America there now stands behind every industrial worker about \$6,000 in invested capital, which results in putting at his disposal something like four primary horsepower.

Random Notes and Sketches

By Sidney Arnold

"The essence of humor is sensibility; warm, tender fellow-feeling with all forms of existence."—Carlyle.

Hard to Learn New Tricks

A very rich man had married a beautiful woman who, unfortunately, was beneath him socially.

They were about to attend a big dinner, and the husband gave her a few words of advice before starting.

"Just be yourself and everything will be O. K., he said. "Don't try to be clever, whatever you do."

During the dinner, at a moment when the rich man's wife was resting her clasped hands on the table, there came a lull in the conversation.

"Awful pause," remarked Charles E. Hall, Indianapolis, by her side, with a smile.

"And so would yours be," snapped the other angrily, "if you'd worked at a washtub all day for five years like I did before I was married."

* * *

Here's a Fast One

Red Hot—"Did you ever hear the story about the pair of tights?"

Ice Cold—"No. Go ahead and spring it."

Red Hot—"Once upon a time there were two Scotchmen."

* * *

L. M. Burt and Fred Goodall were arguing as to whether it was correct to say of a hen "she is sitting" or "she is setting."

"The question," said the farmer who overheard the two furnace men, "don't interest me at all. What I want to know when I hear a hen cackle is whether she is laying or lying."

* * *

Nothing Else Left

"Is your store completely modernized?" asked the efficiency expert.

"Yes," replied Mike Reif. "Now that my school girl cashier has taken up smoking and my old maid book-keeper has had her hair bobbed—it is!"

Clever Boy

Boss Fred Heads, Chicago office, Hart & Cooley Manufacturing Company: "Are you saving half the money you earn?"

Office Boy: "Naw, I don't get that much."

Newt Pierson of Armco, St. Louis—"I just burned a hundred dollar bill."

His Steno—"Gracious, Mr. Pierson, why did you do that?"

Pierson—"It was easier to burn it than pay it."

* * *

"Let me kiss those tears away, sweetheart," he begged tenderly. (He's married now to someone else so I can't mention his name.)

She fell into his arms and he was very busy for a few minutes. But the tears flowed on.

"Can nothing stop them?" he asked breathlessly.

"No," she murmured, "it's hay fever, but go on with the treatment."

* * *

"Have a good hunting trip?"

"Rotten. Ran out of booze and lost two hundred playing poker," growled Ed Stollenmeyer of Walworth.

* * *

A Literal-Minded Steno

Joe Mattingly, Indianapolis, Indiana, dictating a few days ago, was in doubt as to the use of a certain phrase, so he said to the stenographer:

"Do you retire a loan?" and the wistful eyed one replied rather sleepily:

"No, I sleep with mama."

* * *

Open Season

"Now, remember, my dears," said Mother Raccoon to her children, "you must always watch your step, because you have the skin the college boys love to touch!"

Proof Positive

Young Thing: "I have brought this book back; mother says it isn't fit for me to read."

Librarian: "I think your mother must be mistaken."

Young Thing: "Oh, no, she isn't. I've read it all through."

* * *

"Just where did the automobile truck hit you?" asked the dealer.

"Well," said the injured young woman, "if I had been wearing a license plate it would have been badly damaged."

* * *

Ma: "Where's the cow, Johnnie?"

Johnnie: "I can't get her home; she's down by the railroad track flirting with the tobacco sign."

* * *

A man who was wanted by the police had been photographed in six positions and the pictures sent out to the state police. In a few days headquarters received this from the chief at Columbus, Ohio, Art Lamneck's town: "I duly received the pictures of the six miscreants wanted. Five of them have been captured and we are on the trail of the sixth."

* * *

Toast to the Ladies

Here's to the ladies, Lord bless em!
You recall how we used to help dress 'em;

It was "Honey, hook this,"

Or, "Dearie, pin that,"

"Please lace my shoes,"

Or "Straighten my hat."

A man had to be little Johnny-on-the-spot

In the old-fashioned day; whether willing or not.

But now—what a joy and a blessing!

We live in the age of sane dressing.

There's nothing to fasten

On silken hose trim,

Nothing to lace up

And nothing to pin.

So here's to the ladies, Lord bless 'em!

They're as fair as they were when we dressed 'em.

The Future of the Sheet Metal Contractor Is Unfolding and the Fields of Opportunity Are Just Ahead

Contractor Must Be Prepared to Grasp Opportunity When It Arrives

By BENNETT CHAPPLE*

THERE is nothing wrong with the sheet metal business. This thing that is wrong is the attitude of the men engaged in the business, and that includes everyone from the manufacturer of the iron and steel sheets, the distributor and jobber who market them, and the sheet metal contractor who cuts them up and puts them into service.

The business thinkers of the day are telling us success in practically all lines of activity today depends more upon the mental attitude than mental capacity. If this is so we haven't far to go to find out what's wrong with the sheet metal business.

We are short of vision, we are near sighted, we are in a rut, we need a lift, we need some one to take us by the hand and lead us up to the heights where we can see the "promised land" of new opportunities in the sheet metal contracting business.

Let us suppose some Moses should rise up in our midst and take us up on High. What do you suppose he would point out to give us new courage for the years ahead. I can't answer for Moses, but I'll tell you what I think he would include in the picture.

First, he would point to the fertile field of metal houses. They are coming, no doubt about it, but whether the business will be taken over by sheet metal contractors is not so sure. It seemed obvious that the blacksmith shops should have graduated into garages, but the blacksmiths were too busy bending over their task of shoeing horses to see anything else, and a new type of

mechanical service was developed.

How can the sheet metal contractor perfect himself for such new responsibilities? He will have to become a real contractor instead of just a tinner. He will have to know construction, how to read blue prints, how to advise with architects. Then the charcoal pot and soldering

Among the items enumerated by Mr. Chapple which go to prove that the sheet metal industry and the contractor have an opportunity to render greater service to the public are:

1. The Metal House of the near future.
 2. Warm air heating. "Every highway for air a highway for sheet metal."
 3. Metal roofing and siding. "Basis of entire industry."
 4. Vitreous enamel table tops, refrigerating machines and roofing tile.
 5. Cornices. Business coming back because cornice lends attractiveness.
 6. Sheet metal furnace.
 7. Work being done by various organizations and associations.
 8. Individual advertising effort.
-

iron will become merely incidents. Acetylene torches, welding equipment, small riveting and bolting machines will make their appearance in answer to the demand for new tools and equipment. The noise of the carpenter's saw and hammer will fade away with the scarcity of lumber and the growth of steel homes.

What's wrong with this picture? Absolutely nothing. If sheet metal contractors want this business they must organize and prepare to get it, but opportunity has a way of slip-

ping by those who are asleep at the switch.

What else do I see in this "promised land?"—A rebirth of the metal roofing business—not cheap, thin gauge, flimsy material that brought its downfall under the attack of rust, but sturdy, special made, properly coated iron and steel that will give adequate service life. The use of vitreous enamel, as applied to shingles, gives new possibilities of color effect for homes. In its infancy today, I predict a tremendous future for vitreous enamel shingles. It is the sheet metal contractor's opportunity to join in the general movement for artistic color expression.

And what else do I see in this promised land of sheet metal contractors' opportunity? It is the rising peak of heating and ventilating acceptance which has been growing in the consciousness of the public.

Fresh air is the most important thing in life. Conditioned air—not too hot, not too cold, not too dry, not too moist, is the ideal of ventilating engineers and much progress has been made. We jerk it by the coat collar in here and out there and it likes it. Every highway we build for air to travel is a ventilation duct to be erected by some progressive sheet metal contractor. I know of buildings in New York, now under construction, where the ventilating installation alone cost more than \$500,000. I know of a skyscraper, the first seventeen stories of which are being built today without a single radiator. Every office room is served by conditioned air—70 degrees Winter and Summer.

Recently I interviewed five leading ventilating engineers in New York City and from their lips I learned that ventilating is but in its infancy. They told me there are

*Address by Bennett Chapple, Director of Publicity of the American Rolling Mill Co., Middletown, Ohio, delivered at the convention of the National Association of Sheet Metal Contractors, Statler Hotel, Cleveland, Ohio, May 23, 1928.

more than five hundred motion picture houses today waiting to be air cooled by scientific means. It is apparent there is no limit to the possibility in this direction.

On the other hand we have the warm air furnace industry. The highly competitive condition of industry among the manufacturers has cut into the legitimate profit to the sheet metal contractor, which is the logical sales outlet. If you will compare the regular profit to the plumber when he installs vapor heat with the regular profit on the installation of a hot air furnace by the sheet metal contractor, you will catch the point.

There are signs ahead that the furnace industry may become stabilized in order that better selling methods can be profitably introduced. This will spell a new opportunity all along the line.

Another bright spot in this promised land is the growing architectural interest in metal cornices and marquise. Here is the field for the artistry of the sheet metal contracting business. Beauty and culture feeds the soul with its creative art, and here is to be found the field for the creative art of the sheet metal industry. Architects tell us metal cornices are coming back, and they ought to know. The sheet metal contractor must meet this demand with better craftsmanship than the world has ever known in the cornice business. Can we qualify when called upon? That's the question.

At the present time the sheet metal contracting industry has existed more or less on a thin diet of pipe and gutter and furnace repairing. It has required no sales effort to carry on a business so modestly conceived, and even so, the general tendency has been to do business regardless of cost or profit. The smaller the business the longer it can stand up under such conditions and that explains more than anything else the hardihood of the average sheet metal shop.

The conditions are being rapidly changed. Sheet metal men are learning how to figure costs and profits and are getting courage

enough to ask for both. Each year finds more and more sheet metal shops digging themselves out. They are becoming merchandisers of their service at good prices.

Another peak in this "promised land" is the co-operative effort of the sheet metal manufacturers through the Sheet Steel Trade Extension program. After three years experience they are just beginning to function in a big, broad way towards creating wider markets for the use of sheet metal. Approximately half a million dollars are spent annually by this agency and individual manufacturers, and every dollar goes in support of the development of the sheet metal contractor's business. The work is of supreme importance to every contractor and promises much for the future.

The sheet metal contractor, too, must advertise. He must come to realize that advertising is the sword arm of modern business. By its use, he extends his frontiers and stimulates greater activity among all his prospects.

If I were a sheet metal contractor, I would make up my mind to advertise, and I would advertise now, today, tomorrow—consistently. You cannot point to a single outstanding business success that has not used advertising effectively. Is that not enough to convince sheet metal contractors that good advertising is a good investment, and not an expenditure? Use some space in your local papers. Send out letters once in a while telling about your service and if you do a good job of it you will be well repaid. But remember this one thing—poor advertising does not pay any better than poor workmanship pays.

Perhaps you are disappointed because I have not taken the time allotted for this subject, "What's Wrong with the Sheet Metal Business" to berate you and cry shame because we have too often indulged in the gentle pastime of cutting each others throats. Such a blood letting process is unwholesome to say the least. The business is faint from it today. Tomorrow is at hand! The "promised land" is ahead and we

can march into it with banners flying. Out of a common understanding of our problems comes new faith, new purpose, new determination. It first takes root, then buds and blossoms and bears fruit. There is nothing wrong with the sheet metal business—It's with ourselves and its solution is a matter of personal salvation. Let us get the interest, get the enthusiasm, get the vision, and get the business.

W. L. Seelbach Heads Gray Iron Institute

WALTER L. SEELBACH, secretary and treasurer of the Forest City-Walworth Foundries, Cleveland, was elected president of the new Gray Iron Institute, which was organized in Philadelphia last Friday at a meeting attended by 150 representatives of gray iron foundries. He had served as chairman of the organization committee.

J. H. Bruce, Bowler Foundry Company, Cleveland, chairman of the merchandising committee, presented the report of that committee, in which the objects of the Institute are stated as follows:

"The promotion of sound business ethics in the industry, based on honor and integrity in manufacturing and selling gray iron castings by its members.

"The collection and distribution of information relative to the manufacture of gray iron castings.

"To study new methods for merchandising gray iron castings, to strengthen present markets, to develop new markets and to discover new uses for gray iron castings.

"The production of uniformity in methods of cost accounting.

"Research work to further improve the quality of gray iron castings and to increase their utilization in industry, co-operating with other research agencies toward that end.

"The stimulation, by co-operative effort, of the use and sale of gray iron castings.

"The establishment and maintenance of standards of quality for gray iron castings."

Gas Fired Furnaces Must Be of Cast Iron to Stand Up, Says One Manufacturer

Can Be Made Satisfactorily of Sheet Metal Says Another, and So We Have

An Answer by EDWIN A. JONES of the L. J. Mueller Furnace Co.

THE writer has read with interest the paper on gas-fired furnaces in the May 5th issue of the AMERICAN ARTISAN, by Mr. J. A. Martin, President of the Gas-Fired Furnace Ass'n of Southern California, and notes that Mr. Martin takes issue with certain statements which the writer made at the Convention of the Michigan Sheet Metal and Roofing Contractors' Association, at Kalamazoo, and published in your issue of March 10th.

Mr. Martin's conclusion that sheet metal is a satisfactory material for gas furnace construction seems to be based solely on experience in and about Los Angeles, where heating requirements are less than in any other part of the United States, and due to the great amount of speculative building, but little consideration has been given to permanence. Southern California also enjoys a bountiful supply of natural gas, which is particularly free from sulphur.

Mr. Martin's association is doing much at present to raise the standards of installations and quality of merchandise used in Los Angeles, but it must be remembered that practices and standards of operation which may be satisfactory in a climate where frost is practically unknown would not apply elsewhere.

All gas fuel contains a large percentage of hydrogen, which forms water when combustion takes place; the amount of moisture so produced will average around .85 lb. per 100 B.t.u's. For a furnace of 800 sq. in. rating, under average climatic conditions, this will amount to roughly 3,000 gals. of water a year, produced by the fuel, which must pass through the furnace and up the vent.

If gas contained no sulphur, this would not be particularly serious, but all manufactured and most nat-

ural gas contains sufficient sulphur, so that condensation deposited on metal surfaces, dissolving the sulphur oxides in the products of combustion, becomes a solution of sulphurous and sulphuric acid, which rapidly disintegrates sheet metal.

I quite agree with Mr. Martin that condensation should be eliminated insofar as possible, but with intermittent operation, and pilot lights, there is condensation present on surfaces of a gas-fired furnace during a considerable portion of the time. Throttling control with reduced burner flame aggravates this condition. If a furnace is well designed this may merely be a dampness on the surfaces. In some designs it may accumulate to such an extent that a drain of some sort is required.

How long sheet metal will last depends on the severity of the climate and the sulphur content of the gas. With manufactured gas in cold climates it frequently rusts out in less than a year.

The purchaser of a gas furnace should expect lifetime service from that appliance. No manufacturer or dealer is going to build a reputation on a 1, 10 or 15-year job.

From a standpoint of heating results only, cast iron has decided advantages. The weight of metal in a cast furnace acts as a balance on a heating plant as the fly wheel on an engine. A sheet metal gas furnace with negligible specific heat does not permit uniform temperature, and during off periods will create cold drafts across the floor, particularly from first floor registers with continuing runs, where cold air from above drops down and across first floors when the furnace is off. Probably this latter condition is not so objectionable in Southern Cali-

fornia, with no cold weather, and air supply from basements the rule.

The American Gas Association Laboratory requirements and Los Angeles city ordinances are excellent, but are merely steps in the right direction, since they are minimum requirements and neither has any provision to insure maximum life or uniformity of results from appliances approved.

The company with which the writer is associated has one of the largest and best equipped sheet metal shops in the country, and could doubtless turn out a large number of light furnaces at a low price. And there is always a market for a low-priced article. They have, however, been building furnaces for over 70 years, and hope to for a longer period in the future, so shall continue to make gas furnaces of cast iron only.

How Can the Trade Association Justify Its Existence?

The trade association itself today can justify its existence only by proving it is as much a business institution, managed in a business-like way, as are its individual members. Sixty per cent of all activities of the business world today are really beyond the control of any individual, because they can be fully developed only through collective enterprise. I refer specifically to such items as credit, merchandising programs, shows and trade exhibitions, and similar essentials for national distribution of goods in this era of giant competition between industries. The trade association is taking on entirely new functions, because of changing conditions, and is rapidly becoming the "general staff" in the new battle for business.—B. W. Ruark.

Do You Want Your Son to Follow in Your Footsteps?

If So, You Will Have to Start Training Him Into It at an Early Age

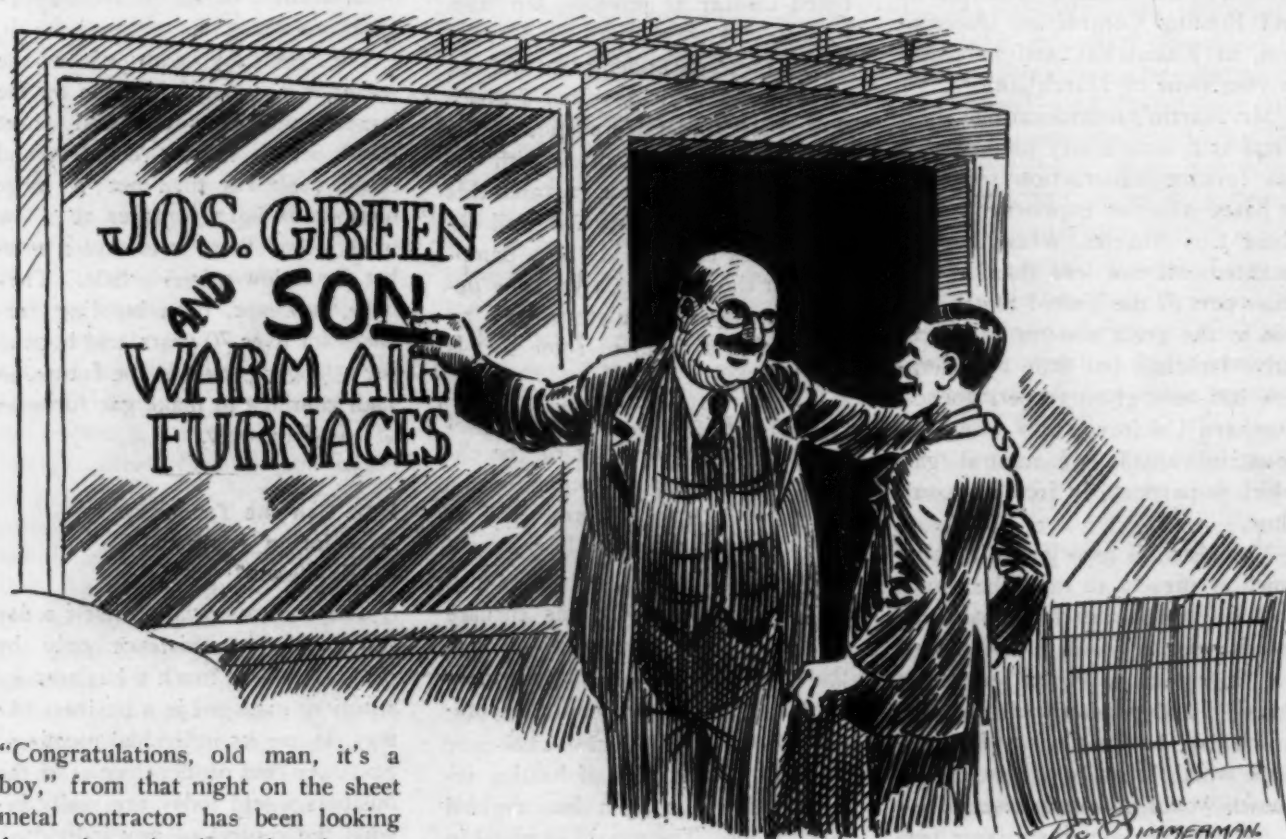
IS there a sheet metal contractor or warm air furnace installer who does not want his boy, his son, to follow in his footsteps, to carry on his work? It is doubtful. Practically every successful man sooner or later expresses a desire to take the boy into the business as a partner when he becomes of age.

From the night when the doctor patted him on the shoulder and said,

He Never Takes Account of the Counter Attractions

At last when the lad reaches that age when he has a mind of his own and looks about to determine his life's work, his father is bound to get a sudden shock. In this age of white collar jobs, comparatively few boys have entered their father's shops.

—one that fed him all those years. Years later, he wakes up and realizes his mistake. Especially so when he sees what a fine business some boyhood pal has simply because he went into his father's trade. When he does wake up, when he finds the trade or work he chose in preference to warm air furnace installation or sheet metal contracting is not what he thought, then it is too late!



"Congratulations, old man, it's a boy," from that night on the sheet metal contractor has been looking forward to the day when he can add "& Son" to the sign over his shop. For years he works to build up a business to hand over to his boy some day. That is his goal.

He takes it for granted that the boy will want to be a sheet metal contractor. He doesn't give a thought to the fact that the boy might want to be something else or that he should begin early to impress upon the youngster the desire to follow his father's trade.

Why?

Because, on the surface, some other work, some other position, attracts them. The boy thinks there is a greater future in that other work; at least it is better than sheet metal contracting, he thinks, when he recalls how hard his father had to work to build up the little shop.

But little does he know that in his quest for success he is passing up the greatest opportunity of them all

His father's shop has passed into other hands or out of existence and his father has passed into the Great Beyond. It is too late; he must pay the penalty.

Every father who believes in sheet metal and warm air heating, owes it to his son to point out the future in those businesses.

The way is not by brute force, by compelling him to enter the trade against his wishes. No one makes a

success at anything which he inwardly hates.

The right way is by impressing in his mind the "father to son" and the "carry on" spirits, by pointing out that warm air furnace installing offers as much and more than any other trade, and by pointing out the reward that awaits him if he follows in his father's footsteps.

Some boys enter the trade because they have been trained to obey their parents' slightest whim. Others have been compelled. The boy who enters with full knowledge and conviction that he wants to be a warm air heating or sheet metal contractor because of the future ahead of him, will achieve the greatest success.

No father should fret and fume when his son says he wants to become this or that, anything but a dirty, old greasy contractor. Instead he should try to win him to his way of thinking.

The Why of Carrying On

At the first opportunity he should impress upon him the "father to son" and the "carry on" spirit. Years ago boys were trained from childhood on to take up the tools of their father's trade. When they were old enough they entered their father's shop. When he died, they stepped in. They taught their boys to do the same thing. Father to son businesses through and through were they.

Today many of our largest companies and successful businesses are the result of the foundation laid by a father years ago. That father took his boy into his business. When he passed on, the son carried on. Then the son's son came into the firm and so on until even today the business is a father to son concern. Each son, the future head of the business, was trained to "carry on" the family business, to keep the family name alive in the world of business. Many of our present day corporations would not be what they are if it were not for that practice. Each son had the "carry on" spirit in him. Others worked for gold but these sons worked for their sons so

that they too may "carry on." It was that spirit which made them grow larger and bigger and better with each succeeding generation. It will continue so until some son will fail to see the light, will fail to carry on; then the work of genera-

To prove to a boy that warm air heating holds the greater future, his father must know just what the trade or work is that appeals to him.

It is best to let the boy, himself, tell why he wants to be what he wants to be. In most cases the pay



Teaching the Young Idea the Meaning of a Contract and Its Various Phases.

tions will pass out of the family into other hands.

Any boy who gets that spirit planted in him will not need urging to learn his father's trade. There are so many evidences of it around him.

A father can point out to his boy similar successes right in the trade. In every locality there is some warm air heating or sheet metal shop that was handed down from a father to a son. Most of them, I have found, are successful.

is the attraction. In others, it is because the work seems easier or one need not dirty his hands.

After hearing the boy's side it is easy to turn his arguments around to show him how the trade offers him every opportunity that the other job does.

It is the boy who has had a good education who does not want to follow his father. He feels that with a good education he can get something better.

There are a few things about white collar jobs that the average boy doesn't know. Such jobs offer good pay at the beginning with rapid increases then suddenly offer little increase in pay and small chances of advancement. The proof is to show the youngster the classified "help wanted" and "situations wanted" ads in the newspaper.

Let the lad see the salaries offered for bookkeepers, stenographers and other white collared help; \$25 to \$40 at the most!

Let his dad ask him how that compares with from \$50 to \$65 as a journeyman and with considerably more for a boss.

Let the boy look at the "situations wanted" ads; let him see the number of bookkeepers, stenographers, and the like advertising for a job.

He should know that supply and demand regulates wages and also the opportunity for advancement. There is more than enough white-collared help. The supply is greater than the demand with the result that the wages are low.

In the warm air heating trade there is a demand for men because boys are passing up the opportunity to learn the trade for "snap" jobs. The result is that the demand is larger than the supply and of course high wages are offered.

Beyond a doubt, a boy can earn as much in warm air heating and sheet metal contracting as in the average job as a workman; as a boss his ability is the only limit to the amount he can earn.

Most boys want to be their own boss; there are few who want to work under another's orders forever. Yet few become bosses. It is not easy to work up one's way until he owns his own business. There are thousands of others trying to do the same thing; the competition is keen.

The sheet metal contractor can point that out to his son and make him realize that by entering his dad's business he jumps into a going business that will some day be his. All he must do is to learn the trade and how to manage the business. He need not first learn the

trade and then fight to establish himself in business. The business has already been established by his father.

He will find advancement more rapid under his father's care. His father takes an interest in him and will teach him many little things which he would not otherwise learn. His father has for him a successful shop that will continue to be successful if he grows up with and becomes a part of it, in other words if he trains himself for the day when he will have to paddle his own canoe, and carry on the work of his father.

Most boys would learn the trade if they could jump into a white collar job immediately instead of putting on the overalls first and learning the how's, why's and wherefore's. That is what most of them object to—wearing the overalls. They say "Why work at something hard and dirty when you can get something easier." There is a way around that argument.

There isn't a bright future in sheet metal for the man who is contented with wearing the overalls forever. The successful man is no longer a man in dirty overalls. But before any boy can hope to have a white collar job with a future he must learn the tricks of the trade so that he can instruct the men how to do the work, so that he can tell if they are doing it correctly, and so that he knows what he is talking about.

The boy who is to take his father's place some day must know how to manage. After he has learned the trade, he will find the inside work as interesting as that of any other job. He will be required to know something of bookkeeping, selling and finance—the other big three sides of the game.

The warm air furnace installer can use two other arguments to impress his son. Boys want to progress both financially and socially. Few working men accumulate wealth. Business men are comfortably situated. They have the better homes, the bigger cars, the luxuries of life. Business men are the lead-

ers in social life—working men follow them. Why? Because they are successful!

One of the best ways of getting the boy to follow your trade, is to ask a successful contractor whose business was handed down to him by his father, to give him a little talking to along the father-to-son lines and how he benefited by listening to his father. The boy will listen to him. He will know that this other man doesn't care if he enters the trade because he has no reason to want him to, and that he is speaking from actual experience.

Another way is to interest the boy in the trade. Show him around the office and shop. Explain things. Take him on the job. Let him see the men at work. Tell him what they are doing and why. Get him interested. Bring home the business papers and put them where he will see them and read them. During vacation let him come down to the shop and help you out. Give him a little pay—a little more than he would get if he worked elsewhere. Give him the chance to see things as they are. If he inherits any instincts from his father, it will show!

After all is said and done and you've tried your best to win him to your ways and perhaps have failed, don't take it too hard; remember, there are hundreds and thousands of other fathers who have experienced the same thing. If he changes his mind and says, "Dad, I guess you're right," then you know you have the one boy in a hundred who wants to be a chip off the old block.

Then it is up to you to make good!

H. S. Busby Now with B. & F. Mfg. Co.

H. S. Busby, who has been with the Hart & Crouse Company for some time past, has become connected with the B. & F. Manufacturing Company of Des Moines, Iowa. Mr. Busby will be sales manager, with his headquarters at Des Moines. The B. & F. Mfg. Co. are manufacturing Liquid Asbestos and Vesco-Enamel Furnace Coloring.

How Can Prejudice Against Warm Air System Best Be Overcome?

Problem Is One of Overcoming Long Standing Domination of Competitive Systems

By W. B. JORDAN*

ON PAGE 19 of the May 5th issue of AMERICAN ARTISAN you invite the installers of warm air furnaces to state their difficulties. So here goes. It may be the same old story, but I'm going to tell it.

This section of the country happens to be one of the hardest in which to sell warm air. Frankly, if you go to some people who are building new homes and mention it to them, they really think that one is a fanatic, or a fool, or downright ignorant. It isn't any use whatever to insist to them to listen to your story, because it would do much more harm than good, as it would anger them.

Then, there are others who come to you and ask you to figure on a good job for them. We do it; have blueprints of a Standard Code installation made up for them; have the manufacturer of the furnace circularize them; and tell the story of its advantages, etc. Then comes price. To that they answer, "Huh! I can get steam heat at that price or for a little more," to which I answer, "Yes, you can get heat, but it would be impossible to get the other two essentials, humidity and air motion with steam heat." There are steam jobs going into 9-room houses here at from \$250 to \$300, and hot water going in at from \$350 to \$450. Frankly, is a good warm air job really as cheap in price as a steam or hot water job? I don't believe people are really getting good steam or hot water jobs at such prices.

One of the leading real estate men came into our place, saying that he believes that "hot air," as he calls it, is the healthiest system and wanted us to figure a good job to replace an old-fashioned hot air job in his

home that he was having remodeled. We submitted our plans and bid. He answered that, although he believed that warm air is the best and healthiest, he had decided to install steam, because if he should decide to sell his home later on that he could more easily sell it and get a much better price for it. Is there any good argument against such a statement? Frankly, in this section of the country such is the case.

Last fall I decided to buy a house, and I told the real estate man that I wouldn't even consider a home with any method of heating but a good job of warm air. Again, these men thought that I was crazy. Houses that they showed me had bum hot air jobs in them, which, of course, I would have nothing to do with. Even the houses with pipeless furnaces had them too small and badly located. I finally bought a nice little house without heat at a trustee's sale. At this sale was a steamfitter friend, who said, "Jordan, of course you are going to install 'hot air,' but deep down in your heart you know that steam is best." I answered that "I wouldn't accept the best steam, vapor or hot water job should he furnish and install the complete system free of all costs." He answered, "Of course, I can't blame you for 'sticking up' for your business." To which I answered, "No, I really most conscientiously believe that warm air, even though a pipeless furnace, should I decide to install one of that type, is the best and healthiest heating system there is today." But he sneered, thinking that I am nutty on the subject of heating.

The prejudice against the warm air system—that is, people judge the new system erroneously with the old-fashioned hit or miss system—is as great if not the greatest of any sec-

tion of the country. Tell them of the research work carried on at the University of Illinois; explain the Standard Code, etc., but that doesn't help very much. They seem to think it might work, but are very doubtful. It makes no difference how strongly you might guarantee it.

Another name for "hot air" here is "dry heat." Try and tell them that warm air is the only system that even provides for humidity—even though they see the water pan—they think that you are a liar, and that such water pans are for ornamental purposes. They seem to think that moisture will just go through a cast iron radiator in a vapor that cannot be seen.

In other words, people here seem to think that warm air is to be used as the very last resort, or to be put in the very cheapest type of house.

Now I have painted a rather blue and a disgusting picture, but we do sell a few in this section. And have these owners coming back, praising the system to the skies, saying that they wouldn't have anything else. But, show these satisfactory installations, and they look as good as any pictured in a catalog, to prospects and have the owners tell about them, they still doubt and will not believe.

I could keep on writing about troubles, but that does no good. We just keep on until we sell another, even though they are rather far between. But those whom we do sell are going to get good jobs at our price or not our job at all. All I have said is how it stands, and it really is very discouraging sometimes, and we feel yellow and want to quit sometimes. If this gives you anything at all to think about, we are glad, but probably you have heard this kind of a tale time and again, but here it is.

W. B. Jordan & Son, Lynchburg, Virginia.

"Offer and Acceptance" in the Law of Contracts

By L. TORRIE, Cincinnati, Ohio

IN THE leading case of 4 Dillon (U. S. C. C.) 431, the Court held that an offer made by telegram must be accepted immediately. In this case a telegram was received Monday, and on Tuesday an answering wire was dispatched accepting the offer. The seller refused to deliver the goods and the buyer filed suit, but it was held that no contract existed and the seller was not bound to make delivery.

However, where the offer is submitted by letter an immediate answer is not always required, unless requested in the body of the letter, because the sending of a letter does not signify the same haste as a telegram.

It is important to know that when a person submits an offer and specifies a time limit for its acceptance, the stipulation must be observed, otherwise the offer lapses by failure of the recipient to accept it in the manner prescribed. For instance, (4 Weator U. S. 225) where a firm submitted an offer to buy merchandise and said "write by return mail, whether you accept our offer" the receiver of the letter failed to answer by the return mail, but sent his acceptance the following day. The Court held the acceptance not binding.

Simply because a person offers to do something, or sell goods at a specified price, without restriction is no reason for the other party to believe that the person who submitted the offer is bound by the agreement, unless convincing evidence can be introduced to prove that the offer actually was accepted before it was withdrawn.

Moreover, where an offer is made by mail or telegram, the time of acceptance is not when the answering message of acceptance is received, but when it is deposited in the post office or telegraph office (36 N. Y. 307).

For example, recently an official

of a firm wrote a letter offering to sell merchandise. The letter was received in due time, and the answering letter of acceptance was deposited in the post office Monday evening. In the meantime, the price of the commodity unexpectedly advanced, and before the letter of acceptance was received the official dispatched another letter withdrawing the offer, and refused to make delivery on the grounds that he had withdrawn the offer before it was accepted. But the Court held that the time of acceptance was when the buyer's letter was placed in the post office, which being before the time the letter withdrawing the offer was mailed made the seller liable.

The records of another very recent case (145 S. W. 546) show that a seller wrote a letter to a prospective purchaser offering to sell merchandise at a clearly stated price. The receiver immediately answered and in effect said "I will accept all of the merchandise you can manufacture the balance of the year." The seller failed to answer the letter, but assuming that the contract was complete proceeded to make and ship a quantity of the goods. The purchaser, however, refused to take the shipment, and the seller filed suit to compel him to accept and pay for the merchandise. The Court held the contract void and of no effect, simply because the seller neglected to write a letter accepting the proposal submitted by the purchaser.

Sometimes litigation develops as a result of a firm relying too much upon the effectiveness of a "notice" printed on an order blank, letterhead, or elsewhere. For example, in 153 Ill. 102, the Court held that the printed words "all sales subject to strikes and accidents" were of no effect and formed no part of the contract.

In another case (246 Pa. 332), wherein the same point of the law was involved, the Court said:

"The rule seems to be well established that printed conditions on letters, bills of lading or order blanks, which are not specially referred to or called to the attention of the other party to the contract, will not be regarded as a part thereof." This Court held the following printed notification not binding on the purchaser: "Any claim..... will not constitute cause for cancellation unless filed within 15 days."

Therefore, it is quite apparent that printed notices are of little effect unless specially referred to, or included in the body of the letter or contract. This is true because, as explained in a recent and very important case (127 N. Y. S. 602), a contract is not valid and enforceable unless all of the parties intended to be bound by it at the time their signatures were affixed. This is a broad statement. Nevertheless, it is the law of contracts.

And conversely it is true that where a person or firm submits an offer, which is not technically accepted, neither party is bound by it, although both parties originally intended for the contract to be binding.

For example, where a person wrote and requested a seller to lay aside a certain article and promised that he would pay a named price for it, the recipient of the letter believing the sale absolute did not deem it necessary to technically accept the offer. However, the Court held that the sender of the original letter was not compelled to accept and pay for the article. The law books are full of similar decisions.

Another common source of litigation is where the duration of a contract is not clearly specified. In 98 N. E. 263, the litigation involved a written contract in which a buyer agreed to accept and pay for merchandise "in such quantities as the trade shall demand." The Court

held the contract void, because no definite time was fixed during which it was to be effective. Under these and similar circumstances either the purchaser or the seller has a legal right to terminate the contract at will.

Furthermore, a contract of sale may be declared void if the "quantity" or "quality" of the merchandise is not clearly specified. Where a manufacturer agreed, for a good and valuable consideration, to deliver merchandise "to be selected by the seller" at an agreed price, the contract was held void, because the "quality" was not specified.

However, in still another case, where the "quantity" of the goods was the chief point of discussion, it was disclosed that a purchaser agreed to pay a stipulated price for "all of the goods the seller could produce." The Court held the contract valid, because, while the exact quantity was not specified, it was determinable.

Broadly speaking, even though the duration of a contract, the quantity or quality of merchandise is not clearly defined, the Court are inclined to hold the contract valid, if the original intention of the parties can be proven with reasonable certainty.

Also, the established custom of the particular locality in which a contract is signed may affect the interpretation given it by the Court. In 137 U. S. 31, the Court explained that the custom of the place in which the contract is signed is a ruling factor, unless the fixed law is contradictory. And recently a firm was held bound by a contract made by its traveling representative, because it proved to the satisfaction of the Court that it was customary in that locality for traveling salesmen to make binding contracts for their employers, although the general rule of the law is that a salesman or agent does not have this power. And this is important knowledge, too.

"Price reduction" or "rebate" is another class of contracts often before the Courts for interpretation.

In 94 N. E. 353, a contract was discussed in which a seller agreed to give the buyer a rebate in the price of a commodity, if the buyer purchased a certain quantity of the merchandise within a prescribed period. The Court held that such a contract IS enforceable against the seller, but is NOT enforceable against the buyer to the extent of his being compelled to purchase the agreed quantity of goods.

In 106 N. Y. S. 1052 a contract of slightly different construction was discussed. In this case it was disclosed that a manufacturer and a retail dealer entered into an agreement by which the retailer was to receive a price reduction "for giving the manufacturer's product preference in sales and for 'pushing' it when possible." The Court held the contract void on its face, and neither the buyer nor seller was bound by it.

Another common source of litigation is where an order, or a contract for the sale of merchandise, is signed by an unknown purchaser who requests credit. The law is well established that such a contract is not enforceable against either the seller or the buyer, unless the seller actually agrees to unconditionally accept the order, or delivers the goods which are accepted by the buyer.

For instance, in the case (84 N. Y. S. 569) a buyer signed a common and usual order form which contained the sentence: "I understand this order is not subject to countermand or cancellation." However, the buyer canceled the order within a day or so after signing it. The seller instituted legal proceedings to compel the purchaser to accept and pay for the merchandise. During the latter litigation testimony was introduced to prove that the seller, having had no previous business relations with the buyer, proceeded to obtain a usual report of his credit rating before delivering the merchandise.

The Court held that the buyer was within his legal rights in canceling the order, and further that purchasers who sign orders under

these circumstances are under no obligation to accept and pay for the goods until the seller fully accepts the order and notifies the purchaser to the effect.

To summarize the situation, a valid contract is a mutual agreement entered into by the parties who honestly intend to carry out the stipulation. And either a verbal or written contract, which may be legal in all other respects, will be held invalid and of no effect where an offer submitted by one of the parties is not accepted by the other.

(Copyright, 1926, by Queen City Syndicate Association, Cincinnati, Ohio.)

What Is Imagination in Business?

Some men say their best thoughts and most productive ideas come to them while firing the furnace, caring for the baby, hoeing the garden, or in any of a hundred different situations which have nothing to do with business.

The explanation is that the ideas are in the subjective mind, all the time, but cannot rise to the reasoning mind until that mind is off its guard as it were. Then, when the conscious mind is "out of gear" or "idling at its work," these rich, fertile ideas develop and are nourished in the great subconscious, rise into the workaday mind and, like a flash of light cutting darkness, we see the future.

It is a great economic loss to neglect to give your mind periods of rest and relaxation—it is a costly loss to keep the mind racing at high speed and constantly active. Shut off the power occasionally, at least once a day, and let your mind recharge itself.

Experience has shown that the most effective solutions to problems have come at unexpected times—when the problems were not consciously in mind at all.

Multiply, then, these moments of relaxation and you multiply ideas that will yield a good measure of reward.

Small Buyers Hold Up Markets—Inquiries and Bookings Lower

Pig Iron Prices Easier—Copper Higher Again

ONLY the automotive industry of the four major outlets for iron and steel is a noteworthy buyer at this time, but the aggregate of demand from small and moderate-size users is sufficient to temper the seasonal second-quarter letdown into a gentle diminuendo. Through a spotty situation, both as to products and districts, it is evident that steel-making holds at just above 80 per cent and opinion grows that the summer dip will be less pronounced than last year.

Announcements concerning third quarter prices on steel products may be forthcoming shortly, but at the moment there is nothing in the price situation to affect buying. Consumers are placing only their immediate requirements and for some lines believe reaffirmation of present levels is in prospect. In pig iron, however, the easier tendency in some districts is a distinct deterrent to buying.

Full Finished Sheet Deliveries Sought

Sheet orders booked by Pittsburgh district mills sustain 80 per cent operations, but at Chicago only 50 to 55 per cent is possible. Automotive users are pressing Mahoning valley full finished makers for deliveries and production is higher there. Sheet prices continue easy. Tinplate mills still operate 90 per cent or better.

Shipments of butt-welded merchant pipe from some Mahoning valley mills exceed the April rate. Cast iron pipe demand droops, but prices hold.

Pig Iron

The Pittsburgh pig iron market remains featureless except for the inquiry for 25,000 tons of basic for the Butler, Pa., plant of the American Rolling Mill Co. This grade is held at \$16.50, valley.

Bessemer sales at \$17, valley, are

more restricted than ever. Only a few single carloads were booked in the past week.

Reduction of the base price of No. 2 foundry and malleable pig iron 50 cents to \$18, Chicago furnace, has served to depress buying activity at present.

Several important inquiries have come out for third quarter and last half, the total amounting to more than 25,000 tons.

Birmingham deliveries of pig iron are more active this month than for several months past. The price is steady at \$16, base, Birmingham. Inquiries for next quarter are slow.

Copper

The market went up $\frac{1}{8}$ cent to 14.37½ cents, Connecticut, May 14, and two days later it advanced unexpectedly to 14.50 cents. Domestic and export buying continued active, but in the past few days domestic users' needs have appeared covered for June and fairly well so for July, so that demand has been less active.

Export sales continue large at 14.75 cents c.i.f., European ports, mostly for June shipment. It looks as if large buying still is to be done for July export.

Some August copper has been bought by domestic users, but not a great deal, and producers are not encouraging users to buy more than their definite and early needs.

In fact, producers have been trying to avoid sales as much as possible in order to keep the situation in hand.

Zinc

Prime western has gone up from a spread of 6.05 cents to 6.10 cents a week ago, to 6.12½ cents to 6.15 cents, East St. Louis, for prompt June shipment.

Buying has not been large, but it has been fairly steady for early shipment. The ore market this

week advanced \$1 to \$40 a ton. High grade metal is moving in a large way and prices are steady.

Tin

Buying by users has been unusually light. Some was done by traders and dealers, but it was not large. Spot and nearby tin supplies are closely held and the prices on these positions have remained relatively firm while futures have slipped.

Consumption continues large and probably is closely balanced with output, but there is less certainty that it will continue so. Moreover, fear of hidden stocks is a factor and as a result market confidence is lacking.

Buyers, who have been protecting themselves ahead and paying more than if they had bought nearby metal, appear to be switching back to hand-to-mouth buying.

Lead

Buying has been light by practically all classes of users, but it is believed consumers soon will be forced in. Prices are fairly steady, but with slight easiness on the East St. Louis basis.

Solder

Chicago warehouse prices on solder are as follows: Warranted 50-50, \$32.25; Commercial 45-55, \$29.25; plumbers', \$26.25; all per 100 pounds.

Old Metals

Wholesale quotations in the Chicago district, which should be considered as nominal, are as follows: Old steel axles, \$16.00 to \$16.50; old iron axles, \$21.50 to \$22.00; steel springs, \$16.50 to \$17.00; No. 1 wrought iron, \$11.75 to \$12.25; No. 1 cast, \$12.75 to \$13.25; all per net tons. Prices on non-ferrous metals are quoted as follows, per pound: Light copper, 9 cents; zinc, 3½ cents; cast aluminum, 13¾ cents.



More reward than your customer's check

MORE reward comes from an ARMCO Ingot Iron job than the check you receive when the work is completed.

For example, the residence pictured above ... Fifteen years ago, J. L. Thompson, of Gas City, Indiana, installed cornices, gutters, downspouts and flashings in his then new residence.

This far-sighted home-builder used rust-resisting ARMCO Ingot Iron. Skilled workers built the job to last.* And it lasted, too. No replacements have been necessary in all the intervening years.

Every square inch of the ARMCO Ingot Iron gives promise of lasting the probable life of the building.

If yours is a shop of "quality work with quality iron" you always get more than the immediate profits on the installation. You secure the lasting goodwill of your customers. And satisfied customers invariably "talk up" your shop among their friends and neighbors.

Why not put ARMCO Ingot Iron to work winning new customers—greater profits—for your shop?

THE ARMCO DISTRIBUTORS' ASS'N OF AMERICA

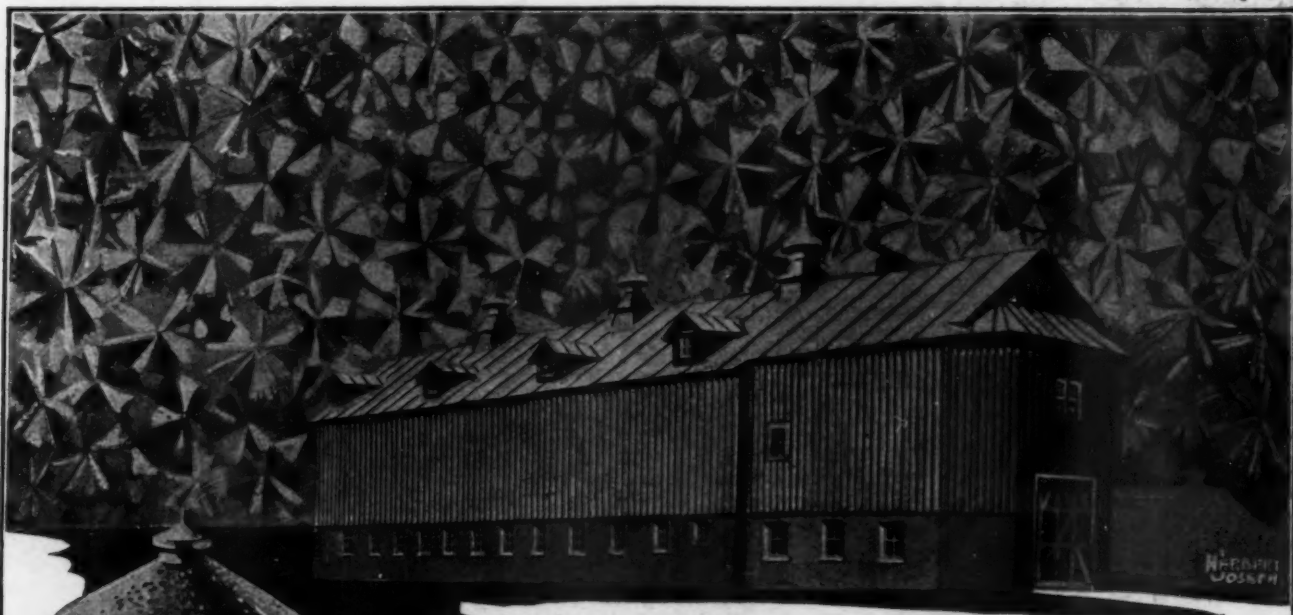
Executive Offices: Middletown, Ohio



ARMCO
INGOT IRON
RESISTS RUST



Here RUST-FIRE is retarded. The only difference between rusting and burning is time—both are oxidation. You can feel and see the fire produced by rapid burning. But when metal rusts, the process is too slow to see. Rust is the "ash" of this fire.



Increase Your Sheet Steel Business *Automatically*

Here is a simple formula for building up your business on sheet steel and products made of it:

1. Use the sales helps and leads offered by the Sheet Steel Trade Extension Committee, Oliver Building, Pittsburgh, Pa.
2. Sell or use only such makes of sheets as invariably render satisfactory service.
3. For roofing and exposed uses adhere to the Simplification Committee's recommendations of 28 gauge or heavier.
4. Whenever practical use the "TEC" Master Brand.

Sales or jobs that prove satisfactory automatically sell others. Sheet Steel thus grows in public esteem. You build up valuable good will for yourself.

Now, just a few words about Inland Sheets. They have been developed for ease of working in the shop and for satisfactory, enduring service on the job. They are soft, workable and uniform. The tenacious coatings are generous. Inspections are rigid.

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38 South Dearborn Street, Chicago

Works: Indiana Harbor, Ind.; Milwaukee, Wis.; Chicago Heights, Ill.
Branch Offices and Representatives: St. Paul, St. Louis, Salt Lake City,
Milwaukee, Kansas City, New Orleans, El Paso



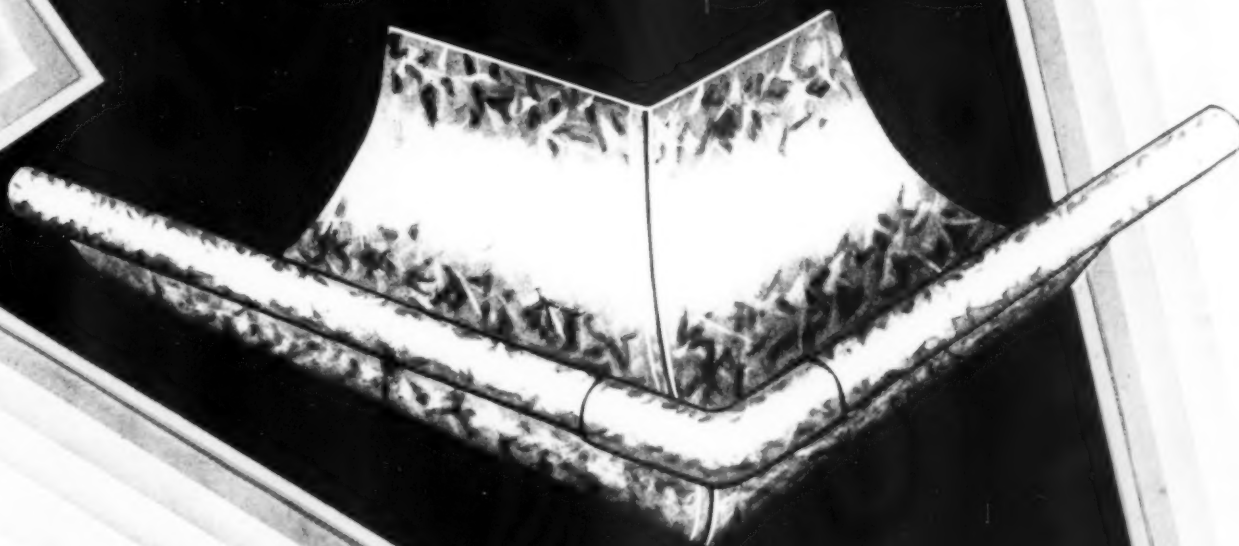
Inland Copper Alloy for Exposed Uses

As a base for regular or Master Brand sheets demand "Inland Copper Alloy." The cost is but a fraction more. Inland Copper Alloy Steel Sheets are durable all the way through. They resist corrosion to a remarkable degree. You will like them. Your customers will too.

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TRADE EXTENSION COMMITTEE

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Barnes Super Miter

The most rigid miter ever made. Designed in two pieces which are joined together by a lock seam. The Barnes clip—an exclusive feature, is rigidly secured where the beaded edges meet. Accurate right angle and adequate bead insure easy assembly on the job.

Use Barnes Products to Build Better Business. Our Booklet Tells How. Write for Free Copy

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1531 Kingsbury Street

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MANUFACTURERS OF CONDUCTOR PIPE, ELBOWS,
EAVES TROUGH, FITTINGS. ALL SIZES. ALL METALS.

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THIS is the home of Barnes Products, in which is housed the specially constructed equipment that insures a continuous uniformity of Barnes quality.

The unusual merit that characterizes Barnes Products is the result of a dominating spirit of "UNDENIED PROGRESS." Because of this unquestioned leadership, "As Good as Barnes" is a common expression in the trade.

To serve you successfully and better than you were ever served before, is our constant aim and ambition. On this basis of a square deal for all, we invite your business.

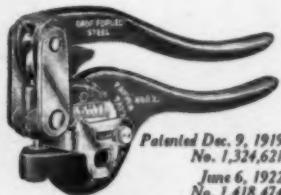
*Use Barnes Products to Build Better Business. Our
Booklet Tells How. Write for a Free Copy*

BARNES METAL PRODUCTS COMPANY, 1531 Kingsbury St., Chicago, Illinois
MANUFACTURERS OF CONDUCTOR PIPE, ELBOWS, EAVES TROUGH AND FITTINGS. ALL SIZES, ALL METALS

HYRO PUNCHES WILL CUT YOUR COST OF PUNCHING HOLES IN SHEET METAL

THE HANDY No. O. X.

*The Greatest
Punch Value
Ever Offered*



Patented Dec. 9, 1919
No. 1,324,621
June 6, 1922
No. 1,418,474

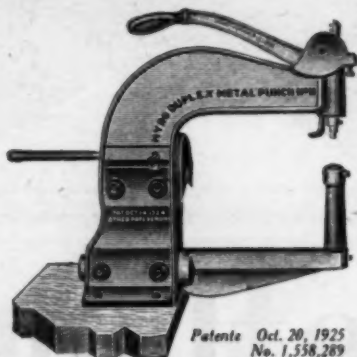
*Now \$5⁹⁰
Complete with
3 Punches & 3 Dies*

Here are a few of the many features of the famous No. O. X.: ¶ (1) Measures only 8" overall and weighs but 2½ lbs. ¶ (2) Can be easily operated with one hand, allowing the other hand to be used for guiding the work. ¶ (3) Powerful: Punches ¼" hole in 14 gauge or equivalent, with ease. ¶ (4) Made of drop forged steel, all moving parts of tool steel, individually hardened and tempered, insuring long life. ¶ (5) Front pointer and side gauge combination, another exclusive feature of

the No. O. X., enables you to punch holes exactly where you want them, many times eliminating center punching. ¶ (6) Punches and dies easily and quickly changed by throwing back handle (wrench and screw driver for this operation provided in the side gauge.)

Punches and dies are made in six stock sizes: ⅛", 5/32", 3/16", 7/32", ¼" and 17/64". Intermediate sizes of round punches and dies can be made to order.

THE UNIQUE No. 18 DUPLEX



Patented Oct. 20, 1925
No. 1,558,289

THE No. 18 Duplex Punch is constructed so that flat work and deep pans can be punched with equal facility. This is accomplished by a removable arbor or horn. When the arbor is set in lower opening (as shown above) it will punch any pan up to 20" in diameter and 5" deep. When the arbor is set in upper opening it will punch flat work. Four set screws on the side of frame assure perfect alignment of punch and die. Back gauge regulates depth of work. Stripper automatically throws work from punch.

Will punch to center of a 20" circle. Capacity—¾" hole in 14 gauge steel up to 1 1/16" in 20 gauge. Nineteen stock sizes of round punches and dies furnished from ⅛" to 1 1/16". Intermediate sizes and special shapes can be made to order.

THE FAMOUS No. XX



Patented April 4, 1922
No. 1,411,890

A COMBINATION bench and hand punch, allowing the work to be carried to the punch or the punch to the work. A pull of the pin releases the punch from the stand. Unusual deep throat opening—3½" deep by 2½" high—allowing the punching of channels, irregular shapes, forms and other shapes.

Equipped with back gauge to regulate depth of work and stripper which automatically strips the work from the punch as the handle is raised. Capacity in steel—¾" hole in 14 gauge, ⅝" hole in 16 gauge, or 17/32" hole in 18 gauge. Measures 9" overall—weighs 4½ pounds.

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HYRO MANUFACTURING CO., INC.
206 VARICK STREET **NEW YORK, N. Y.**



An army of Two Hundred

Through its advertising in daily newspapers, national magazines and trade and technical publications, this Association during 1928 will have an army of more than 200,000,000 fighting rust. That figure represents the total number of advertising messages in these media.

In its advertisements the Association

will point out to owners, builders and buyers of homes that the use of Copper as roofing equipment prevents the necessity of making the frequent replacements inevitable where corrosible materials have been used.

The advertising will show that Copper for roofings, flashings, leaders and

One of the functions of this Association is to offer the complete facilities of its technical staff to members of the sheet metal trade to aid them in solving problems that arise in connection with the proper application of Copper for roofing. This service is yours on request. There is no cost or obligation on your part.

THAT ARE SALESMEN FOR YOU"



is well-built home has Copper flashings, gutters and down spouts outside: Brass pipe, solid Bronze lighting fixtures and solid hardware within. By increasing the demand for durable construction of this type, the Copper & Brass Research Association through the largest national advertising campaign it has ever conducted will create new business for you during the year.

Million fighting Rust

own spouts and Copper or Copper-
ad shingles are rust-proof and there-
re expense-proof. They will give per-
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e house stands.

This Association is making it easier
r the sheet metal industry to sell
opper roofing material. Tie up with

this powerful business-creating cam-
paign by urging Copper equipment
where you are estimating. Keep in
stock an adequate supply of Copper
materials. You will find that home
owners realize that though the first
cost of Copper equipment is slightly
higher the ultimate economy is greater.

COPPER & BRASS

RESEARCH ASSOCIATION

25 Broadway, New York



Champion
Miter

TRADE

MARK REG.

Patented Nov. 21, 1916

The best EAVES TROUGH Miter in the world.

Sold on its merits only. Is perfect in construction and cannot be broken. Will save you time, money and annoyance. Demand the "Champion" from your jobber.



Samples and prices sent upon request

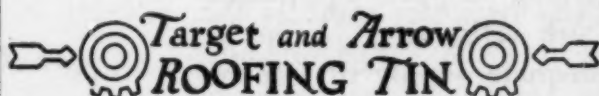
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Manufacturers of Quality Products in Sheet Metal

TWO TAYLOR'S BRANDS

to Tie to

First in the minds of sheet metal men is our famous HAND MADE roofing tin—the highest quality, longest lived roofing tin in the world, the old "TAYLOR'S Old Style," known since 1905 by the new name



Now we have gotten out a New Tin, but the best machine made plate ever produced, for those who want to pay less. This is known as

Taylor's Extra Coated
40 lb. Copper Bearing O. H.

Ample stocks carried by all distributors. Ask them for TAYLOR'S.

N. & G. TAYLOR COMPANY
Broad and Arch Streets Philadelphia

Headquarters for Good Roofing Tin Since 1810



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Have you seen the improved models? The greatest line of Soldering Furnaces today on the market. They should be. There is more experience behind them. Forty-eight years of it! The Gems were popular before the majority of present day furnaces were heard of. It is the oldest, the recognized standard Soldering Furnace today.

Look these models over. Each suits its class. Line them up and take your choice.

Do you want a Catalog?

BURGESS SOLDERING
FURNACE CO.

Department A COLUMBUS, O.

Improved No. 3 Gem with Pump

Say you saw it in AMERICAN ARTISAN—Thank you!

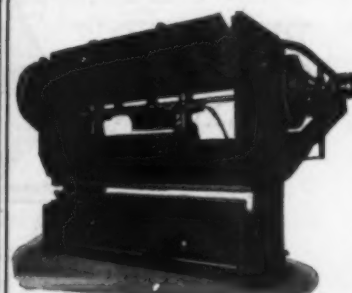
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The perfected result of over 30 years experience in the manufacture of sheet metal bending machines. Over 25,000 machines in use.



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The most complete and up-to-date line of sheet and plate bending and forming machines in the world. Lengths, 3 to 16 feet, with capacity to bend from the lightest metals up to 3/4 in. plate, cold.

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it's made of Sheet Metal or it's used in working Sheet Metal and

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bearing the trade name "Torrif" are made by Diener. None others are genuine. Be sure the Furnace you buy has our name on the tank.

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MANUFACTURER
OF ITS KIND IN
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DEALERS
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GUIDE No. 25-A

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Get this splendid volume on file—consult it as frequently as the shop may call for new tools to make your product quicker, easier and better—then let the tools prove the sole judge of all claims made for them.

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Whitney Lever Punches

Widest known—Most universally used



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**NEW SKYLIGHT
CLOSE CORNER
FLANGE PUNCH**

Every Sheet Metal Worker Needs One.
Weights Only 10 Lbs.
1-2 Inch Opening Above Die Top.



Skyline Punch

**EASIEST OPERATED
QUICKEST CHANGED
FREQUENTLY PAY FOR THEMSELVES
ON FIRST JOB**

Over 40,000 In Use



MADE IN 8 SIZES AND TYPES OTHERS FOLLOWING



No. 2 Punch

ASK YOUR JOBBER

OR

Write us, for circulars and prices.

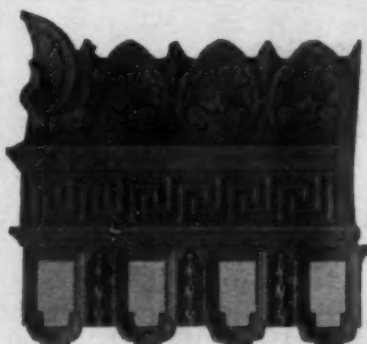
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No. 4 Tinner's Punch



No. 3 Punch



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Made of
ZINC
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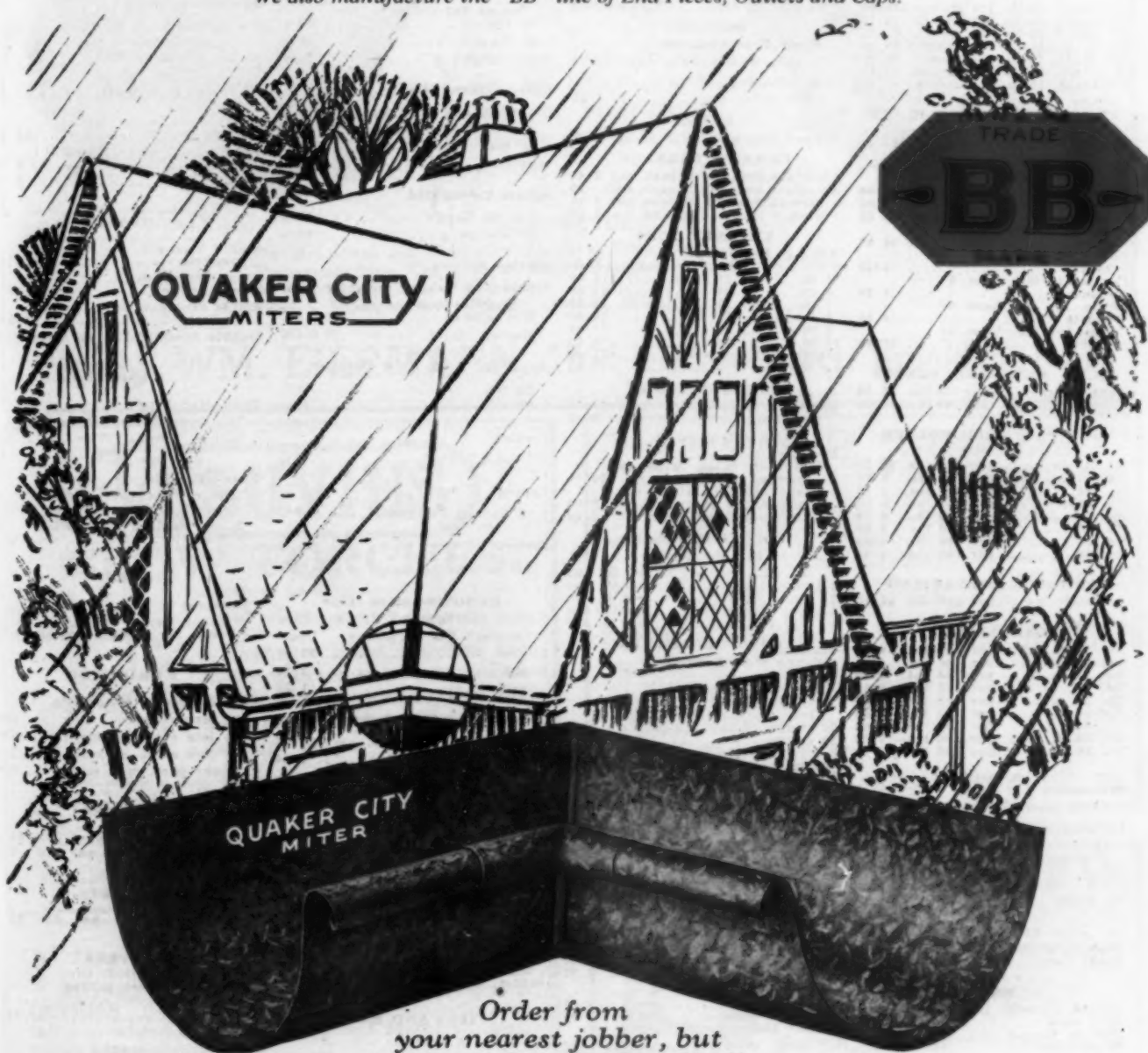
and summer's blistering heat—the eaves trough miter gets more than its share of the hardest weather.

"QUAKER CITY" DOUBLE SEAMED REINFORCED CORNER MITRE is a Berger Bros. Co. product built to stand the most severe weather conditions. The seam is wide and well made and the improved reinforced corner found only on this miter, allows for contraction and expansion.

The "Quaker City" Miter is packed in cartons containing two dozen each and made of Galvanized Steel, Armco Ingot Iron, Toncan Metal and Copper.

In case your jobber is temporarily out of stock we will be glad to ship any quantity from our stock upon receipt of order and jobber's name.

We also manufacture the "BB" line of End Pieces, Outlets and Caps.



Order from
your nearest jobber, but
insist on the "Quaker City"

BERGER BROTHERS CO.

229 to 237 ARCH STREET

PHILADELPHIA, PENNA.

Chicago Warehouse Metal and Furnace Supply Prices

AMERICAN ARTISAN is the only publication containing Western Metal, Furnace Supply and Hardware prices corrected weekly

METALS

PIG IRON

Chicago Fdy.,	
No. 2	\$18.00
Southern Fdy. No. 2	22 01
Lake Superior Charcoal	27 04
Malleable	18.00

FIRST QUALITY BRIGHT TIN PLATES

IC 20x28 112 sheets	\$25 10
IX 20x28	29 60
IXX 20x28 56 sheets	16 20
IXXX 20x28	17 55
IXXXX 20x28	18 95

TERNE PLATES

IC 20x28, 40-lb. 112 sheets	\$25 00
IX 20x28, 40-lb. 112 sheets	27 75
IC 20x28, 25-lb. 112 sheets	21 15
IX 20x28, 25-lb. 112 sheets	22 80
IC 20x28, 20-lb. 112 sheets	19 55
IV 20x28, 20-lb. 112 sheets	22 05
IC 20x28, 15-lb. 112 sheets	18 05

"ARMCO" INGOT IRON PLATES

No. 8 ga. up to and including	
1/4 in.—100 lbs.	\$4 55

COKE PLATES

Cokes, 80 lbs., base, 20x28	\$13 60
Cokes, 90 lbs., base, 20x28	13 80
Cokes, 100 lbs., base, 20x28	14 00
Cokes, 107 lbs., base, IC	
20x28	14 30
Cokes, 135 lbs., base, IX	
20x28	16 40
Cokes, 155 lbs., base, 56 sheets	9 20
Cokes, 175 lbs., base, 56 sheets	10 05
Cokes, 195 lbs., base, 56 sheets	10 90

BLUE ANNEALED SHEETS

Base 10 ga.	per 100 lbs. \$2 50
"Armco" 10 ga.	per 100 lbs. 4 00

ONE PASS COLD ROLLED BLACK

No. 18-20	per 100 lbs. \$2 75
No. 22	per 100 lbs. 3 00
No. 24	per 100 lbs. 3 25
No. 26	per 100 lbs. 4 05
No. 27	per 100 lbs. 4 10
No. 28	per 100 lbs. 4 20
No. 29	per 100 lbs. 4 35
No. 30	per 100 lbs. 4 45

"ARMCO" GALVANIZED

"Armco" 24	per 100 lbs. \$5 15
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GALVANIZED

No. 18	per 100 lbs. \$4 20
No. 19	per 100 lbs. 4 45
No. 20	per 100 lbs. 4 60
No. 22	per 100 lbs. 4 65
No. 24	per 100 lbs. 4 80
No. 26	per 100 lbs. 5 05
No. 27	per 100 lbs. 5 15
No. 28	per 100 lbs. 5 20
No. 30	per 100 lbs. 5 70

BAR SOLDER

Warranted	
50-50	per 100 lbs. \$32 25

Commercial

45-55	per 100 lbs. 29 25
Plumbers	per 100 lbs. 26 25

ZINC

In Slabs	\$ 8 50
----------	---------

SHEET ZINC

Cash Lots (600 lbs.)	\$12 00
Sheet Lots	13 00

BRASS

Sheets, Chicago base	18c
Mill base	18 1/2c
Tubing, brazed base	25c
Wire, base	18 1/2c
Rods, base	18c

COPPER

Sheets, Chicago base	24 1/2c
Mill base	23 1/2c
Tubing, seamless base	26c
Wire, No. 9, B & S Ga.	19 1/2c
Wire, No. 10, B & S Ga.	19 1/2c
Wire, No. 11, B & S Ga.	20c
Wire, No. 12, B & S Ga. and heavier	18 1/2c

LEAD

American Pig	\$7 00
Bar	5 00

TIN

Pig Tin	per 100 lbs. \$59 00
Bar Tin	per 100 lbs. 60 00

HARDWARE, SHEET METAL SUPPLIES, WARM AIR FURNACE FITTINGS AND ACCESSORIES.

ASBESTOS

Paper up to 1/16	.6c per lb.
Roll board	6 1/4c per lb.
Mill board 3/32 to 1/4	.6c per lb.
Corrugated Paper (250 sq. ft. to roll)	\$5 00 per roll

BRUSHES

Furnace Pipe Cleaning	
Bristle, with handle, each	\$0 75

Flue Cleaning

Steel only, each	1 25
------------------	------

BURRS

Copper Burrs only	40-3 1/4%
-------------------	-----------

CEMENT, FURNACE

American Seal, 5-lb. cans, net	\$ 44
American Seal, 10-lb. cans, net	85
American Seal, 25-lb. cans, net	2 25
Pecora	per 100 lbs. 7 50

CHIMNEY TOPS

Adams' Revolving	
4 in.	21 lbs. \$11 00
6 in.	24 lbs. 11 50
7 in.	30 lbs. 12 50
8 in.	33 lbs. 15 00
9 in.	51 lbs. 16 50
10 in.	56 lbs. 18 00
12 in.	66 lbs. 22 00
14 in.	110 lbs. 35 00

CLINKER TONGS

Each	\$0 75
Per doz.	8 40

CLIPS

Damper	
No-Rivet Steel, with tall pieces, per gross	\$9 50
Rivet Steel, with tall pieces, per gross	7 50
Tall pieces, per gross	2 40

COPPERS—Soldering

Pointed Roofing	
3 lb. and heavier	per lb. 40c
2 1/2 lb.	per lb. 45c
2 lb.	per lb. 45c
1 1/2 lb.	per lb. 55c
1 lb.	per lb. 60c

CORNICE BRAKES

Chicago Steel Bending	
Nos. 1 to 6B	Net

CUT-OFFS

Gal. plain, round or cor. rd.	
26 gauge	30%
28 gauge	35%

DAMPERS

"Yankee" Hot Air	
7 inch, each 30c, doz.	\$1 80
8 inch, each 35c, doz.	2 30
9 inch, each 38c, doz.	2 40
10 inch, each 32c, doz.	3 30

Smoke Pipe

7 inch, doz.	\$1 80
8 inch, doz.	2 30
9 inch, doz.	3 00
10 inch, doz.	3 75
12 inch, doz.	4 50

ADAMS No. 1 CHECK

Check and Collar Complete	
8 inch, each	2 00
9 inch, each	2 25
End Check Only	
8 inch, each	1 60
9 inch, each	1 85

Collar Only

8 inch, each	50
9 inch, each	65

No. 2 CHECK

8 inch, each	1 00
9 inch, each	1 00
10% Disc. on Adams No. 1 and No. 2 Check	

Diamond Smoke Pipe

7 inch, doz.	\$ 2 00
8 inch, doz.	3 30
9 inch, doz.	4 80
10 inch, doz.	6 00

Adams' Sheet Metal

7 inch, doz.	\$ 1 60
8 inch, doz.	2 20
9 inch, doz.	2 60
10 inch, doz.	2 80
12 inch, doz.	3 50
14 inch, doz.	5 00

EAVES TROUGH

Galv. Crimpedge, crated 75 & 5%	
Zinc, "Barnes"	.60%

ELBOWS

Conductor Pipe	
Galv. plain or corrugated, round flat Crimp.	
28 Gauge	.60%
26 Gauge	.45%
24 Gauge	.15%

Galv. & Terne Steel

Plain Rd. and Rd. Corr.	
28 Ga.	.60%
26 Ga.	.45%
24 Ga.	.15%

Square Corrugated

No. 28 Gauge	.50%
26 Gauge	.35%

Fortico Elbows

Standard Gauge Conductor Pipe, plain or corrugated.	
Not nested	.70 & 5%
Nested Solid	.70 & 5%

Sq. Corr., A. & B. & Octagon

28 Ga.	.50%
26 Ga.	.35%

Portico

1", 1 1/4", 1 1/2"	.45%
--------------------	------

Copper

16 oz., all designs	.50%
---------------------	------

Zinc—

All styles	.60%
------------	------

ELBOWS—Stove Pipe

1-piece Corrugated, Uniform Blue "Milcor" No. 28 Gauge, Doz.	
5-inch	\$1 05
6-inch	1 20
7-inch	1 75

Special Corrugated

5-inch	\$1 00
7-inch	1 80

Adjustable—Uniform Blue

"Milcor" No. 28 Gauge, Uniform Blue, Doz.	
5-inch	\$1 65
6-inch	1 75
7-inch	2 10

WOOD FACES—50% off list.

FENCE

726-6-12 1/2% (100 rods)	\$32 68
1948-6-14 1/2% (100 rods)	43 62

FILES AND RASPS

Heller's (American)	.50-10%
American	.60-10%
Arcade	.50%
Black Diamond	.50%
Eagle	.50%
Great Western	.50%
Kearney & Foot	.50%
McClellan	.50%
Nicholson	.50%
Simonds	.60%

FIRE POTS

Geo. W. Diener Mfg. Co.	2a.
No. 02 Gasoline Torch, 1 qt.	\$ 12
No. 0250, Kerosene, or Gasoline Torch, 1 qt.	6 50
No. 10 Tinner's Furn. Square tank, 1 gal.	11 20
No. 15 Tinner's Furn. Round tank, 1 gal.	10 70
No. 21 Gas Soldering Furnace	3 60
No. 110 Automatic Gas Soldering Furnace	10 50

Quick Meal Stove Co.

Vesuvius, F. O. B. St. Louis	30%
(Extra Disc. for large quantities.)	

GALVANIZED WARE

Pails (Galv. after made), 10-qt.	\$3 00
Tubs (Galv. after made), No. 1	5 75
No. 2	6 50

GLASS

Single Strength, A, 52-in. brackets	.87%
Single Strength, A, 34 to 40-in. bracket	.94%
Single Strength, A, all other brackets	.89-8%
Double Strength, A, all sizes	.89%

HANGERS

Conductor Pipe	
Milcor Perfection Wire	.25%
Milcor Triplex Wire	.10%

Eaves Trough

Milcor Steel (galv. after forming) List	plus 13 1/4%
Milcor Selflock E. T. Wire, List	plus 80%

HOOKS

Conductor	
"Direct Drive" Wrought Iron for wood or brick	.15%

HUMIDIFIER

"Front-Rank," Automatic	
In single lots	.50%
In lots of 10 or more	.50-5%
In lots of 25 or more	.50-10%
Vapor pans, etc., each	.50%

LIFTERS

Stove Cover	
Coppered	per gro. \$6 00
Alaska	per gro. 4 75

MAILLETS

Tinners	
Hickory	per doz. \$2 25

MITRES

Galvanized steel mitres, 28 Ga.	.70
26 Ga.	.60-20

NAILS

Cut Steel	\$4 35
Cut Iron	4 35

Wire

Common	\$ 10
Cement Coated	\$ 10

(Continued on Page 194)

The EIERMANN

Patented

ROOFERS TOOLS INTERCHANGEABLE BLADES

A NEW Blade, a New Tool Every Time, that's what counts, and the weight does the trick.

YOU can do more work with less effort with this tool than any other tool on the market. Built of metal throughout.

3½" \$4.25
7" \$4.50
14" \$5.00
Extra Blades
8½" 40c, 7" 70c,
14" 80c
Prices—Net.
F. O. B. N. Y.
Del. P. P. or
otherwise C. O. D.

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Stelwagon Mfg. Co., 19th at E. Washington Ave., Philadelphia, Pa.
A. G. Minter, Great Falls, Mont.
Fred S. Stewart, 6143 16th St., Detroit, Mich.

Mfg. by WM. EIERMANN, 1971 Fulton Street, Brooklyn, N. Y.

VESUVIUS BLOW TORCHES

In pint or quart sizes.

With quickly removable soldering iron hooks.

Vesuvius Blow Torches are made of brass or non-corrosive oxydized terne plate. The latter is particularly recommended for hard usage.

Write for prices and illustrated circular today

QUICK MEAL STOVE COMPANY

Div. American Stove Company

825 Chouteau Ave.

St. Louis, Mo.

The NEW IMPROVED "STANDARD"

ROTABLE VENTILATOR

THIS favorite ventilator has been further improved to insure—

Now made
of
ARMCO IRON

Greater Durability
Quieter Operation
Greater Efficiency
Better Balance

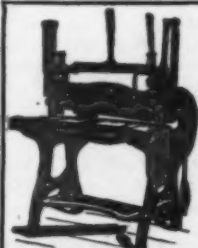
The New Cone-top Suspension, new Bronze Guide Bushings, and Cross Braced Skirt are the new features. Let us tell you in detail all about this better ventilator.

Write for special circular and prices today

"Standard" Ventilator and Chimney Cap—Most Efficient Combination on the market.

STANDARD VENTILATOR CO.,

LEWISBURG, PA.



TREADLE SHEAR

This TREADLE GAP SHEAR is made in all standard sizes for No. 14 and lighter gauge sheets. With it, sheets can be squared, trimmed or slit.

We make a complete line of shears, punches and bending rolls, all sizes for hand or belt drive. Write for Catalog "S."

BERTSCH & COMPANY

Cambridge City, Ind.



Send for catalog today

VIKING SHEAR

Compound LEVER Handle—Removable Blades

A child can work them

VIKING SHEAR CO., Erie, Pa.

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NETTING, POULTRY

Galvanized before weaving60%
Galvanized after weaving.50-10%

PASTE

Asbestos Dry Paste:
200-lb. Barrel\$14 00
100-lb. barrel8 75
35-lb. pail8 50
10-lb. bag1 10
5-lb. bag60
2½-lb. cartons35

POKERS, FURNACE

Each\$0 75

POKERS, STOVE

Nickel Plated, coil handles, per doz.1 10
Wrt Steel, str't or bent, per doz.\$0 75

PIPE

Conductor
Cor. Rd., Plain Rd., or Sq.

Galvanized
Crated and nested (all gauges)75-3¼%
Crated and not nested (all gauges)70-15%

Furnace Pipe
Double Wall Pipe and Fittings50%
Single Wall Pipe, Round Galvanized Pipe50%
Galvanized and Tin Fittings50%

Lead
Per 100 lbs.\$12 50

Stove Pipe
"Milcor" "Titelock" Uniform Blue Stove

28 gauge, 5 inch U. C. nested10 50
28 gauge, 6 inch U. C. nested11 00
28 gauge, 7 inch U. C. nested13 00
20 gauge, 5 inch U. C. nested9 00
20 gauge, 6 inch U. C. nested10 00
20 gauge, 7 inch U. C. nested13 00

T-Joint Made up
6-inch, 38 ga.per doz. \$ 4 00

All Zinc
No. 11, all styles40%

PULLEYS

Furnace Tackle.per doz. \$0 85
.....per gro. 8 50
Furnace Screw (enameled)per doz. 75

PUTTY

Commercial Putty, 100-lb. Kils\$3 50

QUADRANTS

Malleable Iron Damper.10%

REDUCERS—Oval Stove Pipe

7-6, 28-gauge, 1 doz. in carton\$3 00

REGISTERS AND BORDERS

Baseboard, Floor and Wall.
Cast Iron20%
Steel and Semi-Steel.40%
Baseboard, 1 piece.40-20%
Baseboard, 2 piece.40%
Wall40%
Adjustable Ceiling Ventilators40%

Register Faces—Cast and Steel

Japanned, Bronzed and Plated, 4x6 to 14x14.40%
Large Register Faces—Cast, 14x14 to 36x42.50%
Large Register Faces—Steel, 14x14 to 36x42.45%

Ventilating Register

Per gross\$ 00
Small, per pair30
Large, per pair50

RIDGE ROLL

Galv., Plain Ridge Roll, b'did75-10-5%
Galv., Plain Ridge Roll Grated75-10%
Globe Finials for Ridge Roll.50%

SCREWS

Sheet Metal
7, ¼x¼, per gross.\$0 53
No. 10, ¼x3/16, per gross 83
No. 14, ¼x¼, per gross. 83

SHEARS, TINNERS' & MACHINISTS'

Viking\$12 00
Lennox Throatless
No. 1835%
Shear blades10%
(f. o. b. Marshalltown, Iowa)

SHIELDS, REGISTER

No. 1 "Gem" floor.\$12 00 doz.
No. 2 "Gem" wall.8 00 doz.

SHOES

Galv. 38 Gauge, Plain or corrugated round flat crimp.60%
26 gauge round flat crimp.45%
24 gauge round flat crimp.15%

SNIPS, TINNERS

Clover Leaf40 & 10%
National40 & 10%
Star50%
MilcorNet

SQUARES

Steel and IronNet
(Add for bluing \$3 per doz. net)
MitreNet
TryNet
Try and Bevel.Net
Try and Mitre.Net
Fox'sper doz. \$8 00
Winterbottom's10%

STOPPERS, FLUE

Commonper doz. \$1 10
Gem, No. 1.per doz. 1 10
Gem, flat, No. 2.per doz. 1 00

VENTILATORS

Standard30 to 40%

WIRE

Plain annealed wire, No. 8 per 100 lbs.\$3 05
Galvanized barb wire, per 100 lbs.8 90
Wire Cloth—black painted, 12-mesh, per 100 sq. ft.1 35
Cattle Wire—galvanized catch weight spool, per 100 lbs. 2 00
Galvanized Hog Wire, 30 rod spool, per spool3 13
Galvanized Plain Wire, No. 8, per 100 lbs.2 35
Stove Pipe, per stone.1 10

WRINGERS

No. 730, Guaranteeeach \$5 10
No. 770, Bicycleeach 4 75
No. 870, Domesticeach 4 35
No. 110, Brightoneach 3 70
No. 750, Guaranteeeach 5 10
No. 740, Bicycleeach 4 70
No. 23, Pioneer.each 3 40
No. 2, Superbeach 3 05

Round
Corrugated

Plain Round



NEVER MADE WITHOUT THIS

TRADE **F. Dieckmann** MARK

Quality and Service Made 'em Famous

Made of one piece of heavy gauge material, in all styles and angles from 10 to 90 degrees, of 24, 26, 28 ga. ternes, then galvanized after formation.

DIECKMANN
Elbows and Shoes
*are the standard of the market
and always give satisfaction*

*Send for new catalogue 26 showing complete line***The Ferdinand Dieckmann Co.**

P. O. Station B, Cincinnati, O.

Square
Corrugated
Style ASquare
Corrugated
Style B

Not made lighter than
28 ga. or 16 oz. copper

*The most practical shear
for every sheet metal shop.
Economical, sturdy
and speedy—*

Marshalltown
Rotary
Throatless
Shear No. 10

**Only 3 moving parts—
Easy to operate—
Nothing to get out of order**

THIS Marshalltown Shear is operated by hand or power and will take sheets and plates of unlimited width and cut curves in any direction. Cutting can be speedy in cutting straight, circular or any irregular shapes desired. The Shear keeps sharp even after months of hard use.



Marshalltown Throatless Shears are made in several sizes which cut sheet metal up to $\frac{1}{2}$ in. gauge.

The machine shown at the left is our No. 18 Hand Power Shear. Every shop, large or small, needs this machine. It takes sheets of any size and does accurate work quickly. It is high grade throughout, being made of the strongest and toughest metal.

It sells at a price which makes it possible for you to own one NOW. The Marshalltown line includes other labor, time and money saving tools and machines such as: Plate Bending Rolls, Pressure Gauges, Flue Welders, Splitting Shears, Bevel Shears, Punch Presses, etc.

Address Dept. A. A. and ask for our catalog and price list covering our entire line.

MARSHALLTOWN MANUFACTURING CO.
MARSHALLTOWN, IOWA

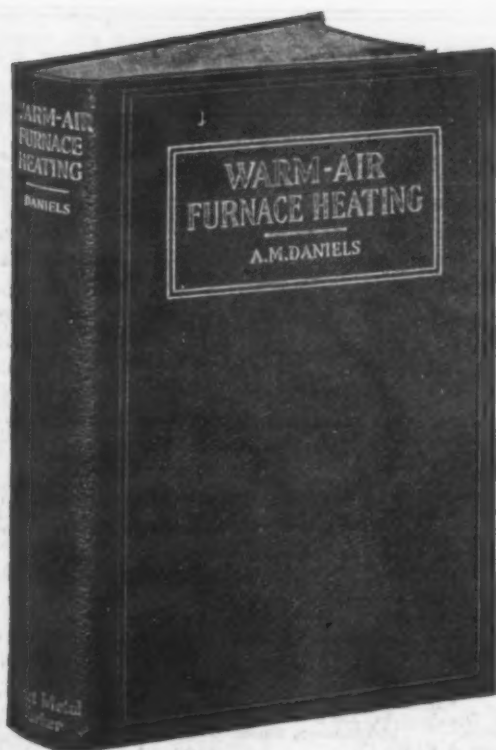
**Brings
your
costs
down—**



**--all
along
the
line**

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- Acetylene (Gas) Dissolved.**
Prest-O-Lite Co., Inc., New York, N. Y.
- Air Filters.**
Sturtevant Co., B. F., Boston, Mass.
- Bale Ties.**
American Steel & Wire Co., Chicago, Ill.
- Bolts—Stove.**
The Kirk-Latty Co., Cleveland, Ohio
- Lamson & Sessions Co.,**
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- Ryerson & Son, Inc.,**
Joa. T., Chicago, Ill.
- Brakes—Bending.**
Dreis & Krump Mfg. Co., Chicago, Ill.
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Joa. T., Chicago, Ill.
- Brakes—Cordless.**
Dreis & Krump Mfg. Co., Chicago, Ill.
- Brass and Copper.**
American Brass Co., Waterbury, Conn.
- Copper & Brass Research Association,**
New York
- Merchant & Evans Co.,**
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Wender-Worker Gas Appliance Co., Cincinnati, Ohio
- Code Calculator.**
Standard Code Computing Rule Co., Baltimore, Maryland
- Cane—Garbage.**
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Fanner Mfg. Co., Cleveland, Ohio
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- Wheeling Corrugating Co.,**
Wheeling, W. Va.
- Chaplets.**
Fanner Mfg. Co., Cleveland, Ohio
- Chimney Tops.**
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- Check Drafts.**
Teela Sheet Metal Co., Oshkosh, Wis.
- Chinker Tongs.**
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- Stover Mfg. & Engine Co.,**
Freeport, Ill.
- Copper.**
American Brass Co., Waterbury, Conn.
- Copper & Brass Research Association,**
New York
- Cornices.**
Friedley-Voshardt Co., Chicago, Ill.
- Milwaukee Corrugating Co.,**
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- Cutting Blowpipes.**
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- Dampers—Quadrants—Accessories.**
Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City
- L. J. Mueller Furnace Co.,**
Milwaukee, Wis.
- Parker-Kalon Corp.,**
New York, N. Y.
- Stover Mfg. & Engine Co.,**
Freeport, Ill.
- Dies—Funch & Press.**
La Salle Machine Works, Chicago, Ill.
- Diffuser—Air Duct.**
Asolus-Dickinson Co., Chicago, Ill.
- L. J. Mueller Furnace Co.,**
Milwaukee, Wis.
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- Drive Screws—Hardened Metallic.**
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- Eaves Trough.**
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- Berger Co., L. D.,**
Philadelphia, Pa.
- Burton Co., The W. J.,**
Detroit, Mich.
- Lupton's Sons Co., David,**
Philadelphia, Pa.
- Milwaukee Corrugating Co.,**
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- New Jersey Zinc Sales Co., The**
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- Wheeling Corrugating Co.,**
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- Fittings—Conductor.**
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- Flanges.**
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- Warm Air Furnace Fan Co., The**
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- Furnaces—Warm Air.**
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- American Foundry & Furnace Co.,**
Bloomington, Ill.
- Armstrong Furnace Co.,**
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Brillion, Wis.
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Detroit, Mich.
- Floral City Heater Co.,**
Monroe, Mich.
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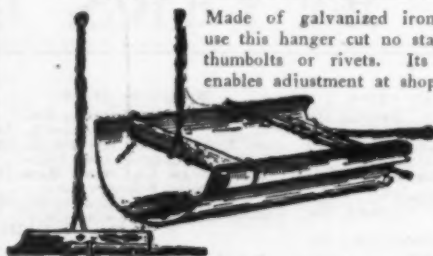
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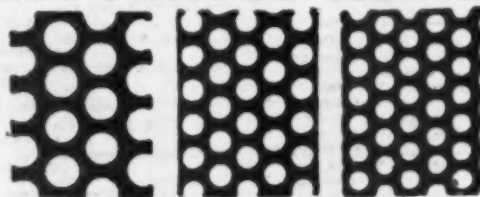
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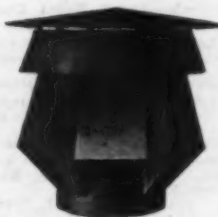
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D-474

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For Sale—Interest in an established sheet metal shop, town of 60,000 inhabitants, in southern central Wisconsin. About \$80,000 business per year. \$10,000 will swing the deal. Address **C-474, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.**

For Rent—Alley tinshop, northwest side of Chicago. Owner disabled, but would like to keep his customers and has just bought a vacuum furnace cleaner which he will rent out. Address **Z-474, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.**

For Sale—Sheet metal and roofing business in the best city in Florida. One of the older firms in city. Going to Europe is reason for selling. Must have \$2,000 cash. Balance to suit buyer. Address **Q-473, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.**

Hardware Stock for Sale—Good clean stock of hardware in South Dakota. Have a good trade. Death of owner is reason for selling. Address **R-473, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.**

SITUATION WANTED

Position Wanted—First-class combination man desires permanent position in Colorado or neighboring states. Can do anything in plumbing, hot water, steam, vapor or warm air heating or sheet metal work. 20 years' experience. Married. Can take charge of shop. Managed one shop 7 years, operated own 5 years. Employed, but can come after May 15. Changing on account of wife's health. Address **O-473, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.**

Salesman with 11 years' experience selling cast steel furnaces. Can estimate and lay out standard code and fan jobs. Wide acquaintance with dealers and jobbers west of the Missouri river. Will be ready to change June 15. Best of reference as to character and ability will be supplied. Address **M-473, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.**

Salesman having five years' experience covering Michigan, Indiana and northern Ohio selling warm air furnaces. Also have had several years' experience as sales manager. Would be glad to hear from any manufacturing company needing a salesman or sales manager. Address **Y-473, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.**

SITUATION WANTED

Middle aged Al tinner and sheet metal worker with exceptionally wide experience who understands plumbing wishes a job in a small southern town with a chance to take business over later. Give full particulars in first letter. Address **"P. M." 1455 Second St., Milwaukee, Wis.**

K-474

Tinner and furnace installer wants position. Can also do plumbing. Twenty years of experience and sober. Prefer location within 300 miles of Milwaukee. Can come any time. Address **L-474, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.**

Situation wanted by tinner, plumber and furnace man. Married and want steady job. Age 29 years. Fifteen years at trade. Minnesota or Wisconsin preferred. Learned trade in Germany. Address **O-473, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.**

Situation wanted by practical sheet metal worker, plumber and warm air furnace installer; also hot water heating. Address **X-473, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.**

HELP WANTED

Wanted—First-class furnace setter or real salesman to invest several thousand dollars and services in our business to act as superintendent as soon as he qualifies. Such a man will earn from two to eight thousand per year, according to whether he is a salesman or furnace setter, and depending entirely upon his ability. Do not answer unless you are competent, and we do not want a drinker. Job in southern Ohio and no traveling. Address **X-474, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.**

Wanted—First-class tinner and windmill man. Must be able to do all kinds of outside and inside work. Steady position in South Dakota town of 5,000. Write fully, giving experience, salary and reference in first letter. Must be sober and not over 40 years of age. Address **R-474, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.**

Wanted—Sheet metal, furnace and general repair man, married, not over 40 years of age, for southern Wisconsin county town. Steady year around job to the man who can deliver. Have schools and churches. State wages and age in first letter. No boozers wanted. Address **W-474, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.**



"You see, I have to do things big, judging by the size of my family," writes a student on the back of a kodak picture similar to the above. He adds: "Nothing small about me, I got through being a cheap mechanic when I took your course, and my business has grown wonderfully since, and I feel I really owe it to the St. Louis Technical Institute."

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HELP WANTED

Wanted—A man to take charge of gas range department. Must have experience in laying out gas range sheet metal patterns and to supervise the assembling. Excellent proposition for the right party. Address F-474, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.

Wanted — Two first-class all around sheet metal workers. Steady position in South. Write fully, giving experience in different branches of business. Address T-473, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.

Wanted — An experienced tinner and plumber. Married man preferred. Steady job the year around for the right party. Give reference and salary wanted in first letter. Address Jamison & Son, Shell Rock, Ia. P-474

Wanted — First-class tinner or sheet metal worker; also do roofing and furnace work. State age and experience. Address Jno. F. Cartwright, Bowling Green, Ky. G-474

Wanted—Salesman with knowledge of warm air and pipeless furnaces to cover New York and New Jersey. State terms and qualifications. Address T-474, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.

Wanted—Salesman to sell and solicit for oil burners and furnaces. Good opportunity. South Side Hardware & Plumbing Co., 1512 S. 12th St., Sheboygan, Wis. H-474

Wanted—Experienced furnace installer and sheet metal man. Only experienced man with good references will be considered. Address Huron Furnace Co., Huron, S. D. S-474

MISCELLANEOUS

For Sale—Double oven Van hard coal range. Range has two ovens, 18x23. Used but in A1 condition. Scarcity of hard coal in this section makes it necessary for our customers to abandon for soft coal range. Address A-475, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.

For Sale—One portable Sturtevant furnace cleaner. Used only 6 months. Will sacrifice at a bargain. One hundred dollars takes it. Less than one-half its cost. Address Wm. A. Seither, 1424 Johnson St., Keokuk, Iowa. M-473

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For Sale — One P. S. & W. 20-inch groover for 2-inch work or larger; good as new; price \$15.00. One P. S. & W. double seaming stake No. 949 with 4 heads; price \$6.00. One Wrights pat. P. S. & W. sheet iron folder, No. 12, 34-inch, in fine shape; \$15.00. One 30-inch P. S. & W. square shear; fine condition; \$60.00. Address R. S. Bridgeman, Fredonia, Pa. A-474

For Sale — Sheet metal working machinery—brake, bench machines and hand tools at about half price. Everything in first-class working order. Write me your needs and the price you are willing to pay or I will quote you. Address S. E. Ethridge, 1103 Denison St., Little Rock, Ark. Z-473



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Iowa territory, old established line. Must have a successful selling record, lay out and figure according to the Standard Code. Give past record and by whom employed for the past five years, in first letter. Address C475, American Artisan, 620 South Michigan Avenue, Chicago.

WANTED

Gas Range salesmen. Commission basis. Write for territory open. A side line or full time. Address W473, American Artisan, 620 S. Michigan Ave., Chicago, Illinois.

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FOR SALE

One pair Power Rolls 76" long with 6" diameter rolls. This pair of rolls are in excellent condition and good for hard service. Will take up to 5/16" metal. Price \$300.00 F. O. B. Louisville, Kentucky. Write Chas. Reibel Co., 118 S. 2nd St., Louisville, Kentucky. K473

SALESMAN WANTED

to sell ventilating equipment of exceptional merit. We are interested only in a good live representative who can produce results — commission basis. Address F473, AMERICAN ARTISAN, 620 So. Michigan Ave., Chicago, Ill.

MR. PRESIDENT,

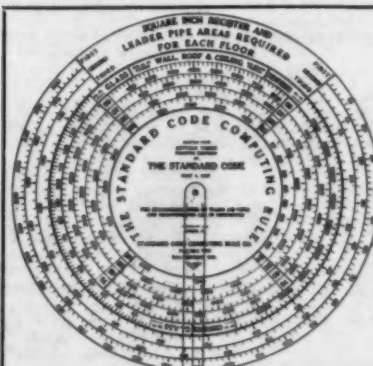
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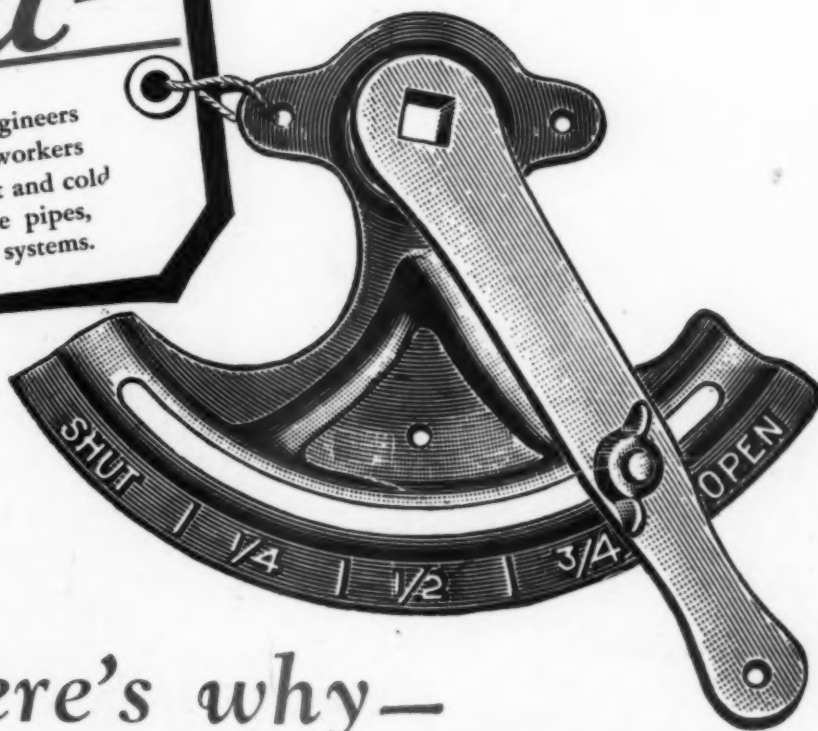
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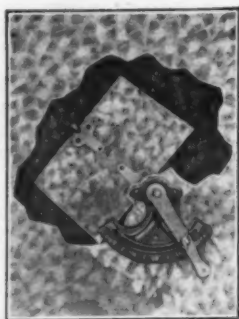
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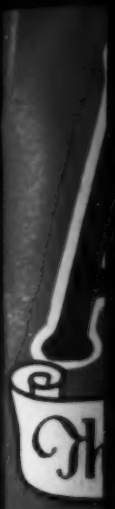
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